

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

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Order Establishing Docket to Review the
Efficacy and Fairness of the Net Metering and
Interconnection Rules

Docket No. 2021-AD-19

**Comments of Entegri Energy Partners, LLC
and Audubon Delta / National Audubon Society**

Introduction and Overview

Entegri Energy Partners, LLC (“Entegri”) and Audubon Delta / National Audubon Society (“Audubon”) are pleased to jointly submit these initial comments in response to the Commission’s Order of 2 February 2021 seeking comments regarding the efficacy, fairness, and functionality of the Commission’s Net Metering and Interconnection Rules.

Entegri is an energy services, sustainability, and solar development company specializing in the implementation of energy conservation and renewable energy projects.¹ Entegri operates in most of the U.S. and maintains offices in Mississippi, Tennessee, Arkansas, Missouri, Oklahoma, and Kansas.

The National Audubon Society protects birds and the places they need, today and tomorrow, throughout the Americas using science, advocacy, education, and on-the-ground conservation.² Audubon Delta is a regional office of the National Audubon Society encompassing the states of Arkansas, Louisiana, and Mississippi.

While Entegri and Audubon are very different organizations, they share a common goal with the Commission in seeking to improve access to renewable energy and to increase development of renewable energy generation in Mississippi, especially at distribution scale and on behalf of public customers, educational institutions, the broadest possible range of residential customers, and other similarly situated customers. Entegri and Audubon also share a common interest in the simultaneous development and deployment of energy efficiency and clean distributed generation to maximize and multiply the benefits of each.

Entegri and Audubon jointly submit these comments in support of the Commission’s creation and maintenance of rules relating to and encouraging the development of distributed generation facilities (“DGF”) operating in the State of Mississippi, particularly DGFs that generate

¹ More information about Entegri is available at: www.entegripartners.com.

² More information about Audubon is available at www.audubon.org.

electricity with renewable resources such as solar energy. Entegrity and Audubon encourage the Commission's focus on renewable resources because these are, in Mississippi, an emerging market sector with the greatest potential for creating customer, utility, and state-wide economic benefits. Entegrity and Audubon have learned from experience in other states that all stakeholders—utilities, customers, and society—benefit when customers can economically and efficiently invest in and have access to the benefits of distributed energy resources (“DER”), including distributed generation (“DG”), distributed storage (“DS”), demand response (“DR”), electric vehicles (“EV”), energy management, and energy efficiency and conservation (“EE”). This experience confirms the Commission's own sponsored analysis of the costs and benefits of DGF in Mississippi conducted by Synapse Energy Economics in 2014, and the analysis and experience in states across the U.S., including many of Mississippi's neighboring states. As was found in Mississippi, the benefits of DG to the utility, non-generating customers, and society far outweigh the costs of such resources to these stakeholders.

To the extent that policy and rules prevent the realization of these benefits for all customers and for electricity service providers, those policies and rules are not as effective or as fair as they could be. Our review of the current NEM policies and rules have identified a number of opportunities to strengthen their effectiveness and fairness. To that end, Entegrity and Audubon applaud the Commission's decision to revisit the efficacy and fairness of its net metering and interconnection rules and offer a number of recommendations for the Commission's consideration in this proceeding.

Entegrity and Audubon are eager to do and see more DER business in Mississippi. By any measure, the amount of DG operating in Mississippi and the number of customers participating in net metering is small,³ especially when compared to the potential in the state for creating not only the energy that DG can produce, but also the jobs and other economic and grid benefits that a robust DG market can produce. There are no compelling economic, operational, or equity issues for constraining access to DG and other DERs. As such, the low level of DG development and the small number of DGF operating in Mississippi is the strongest indicator of the case that the Commission should act to make more DG a reality in Mississippi.

Entegrity and Audubon offer recommendations in several key areas and according to a few main themes that reappear in several places in the following comments.

First, Entegrity and Audubon encourage the Commission to use this proceeding to establish a durable framework for reviewing not only its rules relating to DGF today, but also with a view to the expanding and dynamic opportunities presented by all kinds of DERs in the future as well. Entegrity and Audubon therefore recommend that the Commission adopt a standing definition of “meaningful access” against which metrics can be developed and tracked. The Commission should also order the development of and reliance on a Benefit-Cost Assessment (“BCA”)

³ As detailed in comments submitted by PosiGen, as of the end of 2020, Mississippi Power had fewer than 200 net metering customers whose installed capacity was less than 2 tenths of one percent (0.16%) of the utility's peak load. Entergy's 104 net metering customers represent less than half the capacity of Mississippi Power's (1.1 MW vs. 2.3 MW), or less than one half of one tenth of one percent (0.04%) of peak load. PosiGen comments in MS PSC Dkt. No. 21-AD-19, at 4.

Framework based on the guidance and best practices set out in the National Standard Practice Manual for Benefit-Cost Assessment of Distributed Energy Resources (“NSPM-DER”) for the purposes of informing the setting of compensation rates for DGF production that is fair and reasonable. See attached NSPM-DER overview (Appendix A). Fair and reasonable compensation to DGF investors and operators is essential for optimizing economic efficiency and to prevent forcing these customers and businesses to subsidize the utilities or other customers.

Second, Entegriy and Audubon encourage the Commission to amend its rules to encourage a wide range of deployment and participation options for customers. The needs and interests of customers vary greatly, as the Commission knows. Some customers can participate through private investment in facilities on their premises—provided that compensation rates result in reasonable project economics. Others seek “no money down” options. Still others prefer to participate through cooperative efforts like community or shared or other aggregated approaches. Not only do such aggregation strategies work better for more customers, they also improve the economics of DG deployment in general. Flexible deployment approaches enable maximization of locational value and grid support value. DG development is a high fixed-cost enterprise, just as is the utility industry in general. Aggregation enables the spreading of these fixed costs over more capacity and more energy production than would be the case if behind-the-meter projects are the only option.

Third, the Commission should use this proceeding as an opportunity to clarify and correct uncertainties and flaws in the current rules. Chief among these is that the Commission should establish by rule the legacy rights of customers and businesses that make investment decisions in energy infrastructure in Mississippi by instituting what are often called “grandfathering” provisions. What Entegriy and Audubon seek is essentially the same reasonable opportunity to realize a return on investment that has been long afforded to utility investors in the electricity sector for the useful life of a facility, which is 25-40 years for most solar projects with a common warranty period of 25 years.⁴ In addition, Entegriy and Audubon seek changes in the rules relating to permissible DGF system size, qualification as a Renewable Energy Net Metered Interconnection Customer (“RENMIC”), treatment of renewable energy certificates (“RECs”) to clarify that net metering customers cannot be required to assign their RECs as a condition of net metering service, and the level of DGF development that should trigger utility view relating to safety and reliability, among others.

Entegriy and Audubon submit these initial comments in the spirit of launching and participating in a robust, fact-based dialogue regarding the benefits and costs of DGF deployment and operations in Mississippi. At the same time, the Commission should understand that certain

⁴ National Renewable Energy Laboratory, (finding that photovoltaics (i.e., facilities using solar modules) have a useful life of 25 to 40 years, available at <https://www.nrel.gov/analysis/tech-footprint.html>); World Bank’s International Centre for Settlement of Investment Disputes, *Most Solar Panel Warranties Last 25 Years. Europe’s Plant Owners Are Counting on Much More*, available at <https://www.greentechmedia.com/articles/read/europes-solar-market-grapples-with-35-year-plant-lifespans>; Arkansas Public Service Commission Docket No. 20-015-U, Order No. 7, p. 99 (finding that “Evidence also supports...a common warranty period of 25 years.”);

current practices, such as the mandatory assignment of RECs or clarification of third-party ownership, can and should be addressed immediately. Delay in addressing such issues need not wait for extensive comment processes or data collection. We are confident that other parties to this proceeding will bring additional meritorious suggestions and recommendations to the debate as well. Entegrity and Audubon encourage the Commission to conduct public hearings and take other procedural steps that will ensure all interested stakeholders may be heard and have a meaningful opportunity to contribute to the outcome of this proceeding, and to establish a rich record of fact and opinion to guide the Commission in its work.

In addition to responses to the Commission's eighteen questions, Entegrity and Audubon provide a redline markup of the Net Metering and Interconnection Rules that reflects the issues addressed and recommendations offered in these comments.

Entegrity and Audubon also provide in Appendix A an overview of the National Standard Practice Manual for Benefit-Cost Assessment of Distributed Energy Resources ("NSPM-DER"). In Appendix B, Entegrity and Audubon include letters from educators throughout the state of Mississippi supporting our position.

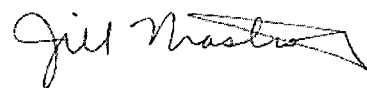
Respectfully submitted,

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Responses to Commission Order of 2 February 2021 Seeking Comments

1. Have the Net Metering and Interconnection Rules been effective in creating meaningful access to renewable self-supply opportunities for Mississippi electric customers?

Response: No.

Discussion: Entegrity is in the business of developing DG, especially for customers in the municipal, educational, healthcare, and non-profit sectors. This year, Entegrity hopes to install 300 kW of solar generation in the state of Mississippi. In comparison, Entegrity plans to install 100 times that amount in the neighboring state of Arkansas. This substantial difference is due to each state's policy and rules.

In Mississippi, Entegrity primarily works with public school districts and universities through the energy savings performance contracting programs, where public entities use operational savings from energy efficiency to fund their deferred maintenance issues. Entegrity's public clients in other states are leveraging solar energy and the Federal Investment Tax Credit ("ITC") for Commercial Solar Photovoltaics⁵ to fund their facility needs, improve their learning environments, and even give teachers raises. Since public entities cannot claim the ITCs themselves, obtaining solar energy from a service agreement helps the entities to indirectly leverage the federal tax benefits to finance the development of renewable solar energy. However, since Mississippi's net metering rules do not expressly include service agreements in the definition of RENMIC, Mississippi's outdated net metering rules are holding back the state, its public entities, and ultimately, its citizens.

Entegrity and Audubon support the overarching objective implied in the Commission's question and believe it should become the foundation of the Commission's vision DG and DERs in general:

All Mississippi citizens, businesses, and institutions should have meaningful and unencumbered access to renewable distributed generation and other distributed energy resources from a robust marketplace of providers, both today and tomorrow.

Achieving such a vision is too important to be left to chance. This vision should be translated into goals, objectives, and most importantly, metrics to track progress on improvements and the removal of impediments. As the saying goes in all high-performing organizations, only what gets measured gets managed.

Recommendation: Entegrity and Audubon recommend that the Commission take action on these particular issues in two ways.

1. The Commission should establish a definition for "meaningful access." The definition should address the economic and practical viability of DG markets in Mississippi for all classes of customers and in all utility service territories.

⁵ U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, [Guide to the Federal Investment Tax Credit for Commercial Solar PV.pdf \(energy.gov\)](#).

2. The Commission should, over the next year, develop actionable, objective metrics for creating, measuring, and improving meaningful access to renewable energy self-supply alternatives.

Benchmark data should be derived from leading states, like Arkansas. Key categories of metrics should include:

- Customer awareness & education, including unbiased information resources.
- Access pathways for all kinds of customers: Residential (own, rent, single family, multi-family, public housing, income strata, etc.); commercial (large, small, rent, own, etc.); government; educational; health care; non-profit; etc.
- Enrollment, leasing, finance options, interconnection, aggregation, and other process and contract issues.
- Installations and operational data, MW, MWh, sites, geographical diversity, etc.
- Financial, economic, and other business data, including jobs, licensed businesses, revenues, etc., with a focus on economic development across the state.

2. What, if any, modifications to the Net Metering and Interconnection Rules could meaningfully increase customer access to renewable self-supply?

Response: Meter aggregation, fair and reasonable compensation for DGF exports, explicit authorization for third-party ownership, business and investment certainty, and interconnection best practices.

Discussion: *Aggregation* describes a suite of generator and offtaker relationships that are not limited to traditional behind-the-meter arrangements. The needs and interests of customers vary greatly, as the Commission knows. Some customers can participate through private investment in facilities on their premises—provided that compensation rates result in reasonable project economics. Others seek “no money down” options. Still others prefer to participate through cooperative efforts like community or shared or other aggregated approaches. Not only do such aggregation strategies work better for more customers, they also improve the economics of DG deployment in general. Flexible deployment approaches enable maximization of locational value and grid support value. DG development is a high fixed-cost enterprise, just as is the utility industry in general. Aggregation enables the spreading of these fixed costs over more capacity and more energy production than would be the case if behind-the-meter projects are the only option.

One excellent example of the potential benefits of aggregation relates to school districts, which can have both multiple meters and multiple campuses, and which may or may not have property suitable for DGF development. Aggregation of school district loads can enable development of large, more economical DGFs, and net metering service from remote sites can enable access to greater locational value for the grid at a scale that is meaningful to utility operations.

Meter and/or customer and/or site aggregation will allow the inclusion of multiple meters and customers into a single account for purposes of association with a single DG facility which may or may not be located on the property of the offtaker customer. Aggregation improves facility

investment and operational economics because of the high fixed costs nature of DG facilities. Aggregation improves access for customer accounts that otherwise would be too small to afford investment in a single dedicated DG facility, or for which an uneconomically large share of the output of the facility would end up being exported to the grid.

Fair and reasonable compensation advances economic efficiency and reduces the risk of discriminatory cost shifts either to or from DGF hosts and operators. Compensation is fair when it transparently and comprehensively accounts for a full range of impacts—both costs and benefits—over the full useful life of the DGF. Compensation is reasonable when it is set based on the best, even if not perfect, quantification of those impacts, and when the methods used to quantify impacts are to the extent possible non-discriminatory, transparent, predictable, understandable, easy to administer, and based on sound rate making principles in general.

Third-party ownership extends the opportunity to access DG and other DER value to customers and communities that may not be in the position to borrow or directly purchase a DGF or a share in a community generator. Said in reverse, requirements for direct ownership of DGFs can act as an income test on DG access because of the high fixed costs of DGFs and therefore will inherently exclude large segments of the population from meaningful access to renewable energy alternatives. The manner in which a customer engages with a DGF or DGF operator should not be limited to any particular structure. In addition to direct ownership, there are options such as leases, lease-to-purchase, service agreements, performance contracts, and other arrangements that can meet the needs of the wide range of customer types in Mississippi.

Third-party ownership also allows tax-exempt entities to access the federal tax benefits through a private entity. As previously noted, since public entities cannot claim the tax credits themselves, obtaining solar energy through a service agreement, performance contracting arrangement, lease, or other mechanism helps the entities to leverage federal tax benefits to provide more affordable financing for the development of renewable solar energy. At the state level, such mechanisms are a positive externality—bringing federal dollars into Mississippi for the benefit of the entire state's economy. Moreover, since the federal ITCs could decline substantially for projects commencing construction after December 31, 2021 (from 22% down to 10%), time is off the essence.⁶ Therefore, it is crucial that the Commission take decisive action in this proceeding to expressly authorize third-party ownership before the end of the year so that public entities in Mississippi don't miss out on this opportunity to leverage federal tax credits for the benefit of the state.

Ongoing discussions in Washington, D.C., about aggressive stimulus and infrastructure funding create yet another powerful incentive for Mississippi to position itself, through the Commission's amendments to the interconnection and net metering rules, as market that is friendly to and supportive of clean and renewable energy development. A state in such a posture will very likely have increasing opportunities to take advantage of job-creating and economy-stimulating programs.

⁶ U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, [Guide to the Federal Investment Tax Credit for Commercial Solar PV.pdf \(energy.gov\)](#).

Regulatory certainty is essential to support the establishment, growth, and maturity of new market segments, just as it is for regulated utilities. Customers that participate in DGF projects are making significant, long-term financial investments in resources in order to obtain the long-term benefits that such facilities operate. In return, the utility and society obtain long-term, self-insured, self-financed, low-maintenance, and low pollution energy and capacity benefits for a quarter-century or more.

Likewise, outside investors are looking for explicit permission. The perceived ambiguity in the current rules translates very simply into risk for outside investors. Although the current rules expressly allow for third-party operation and maintenance of DGFs,⁷ they do not expressly allow third-party ownership with the exception of lease agreements. Thus, in order to provide regulatory certainty and facilitate investment in Mississippi, Entegry and Audubon propose to expand the definition RENMIC to expressly include customers who obtain electric energy from the DGF pursuant to a contract or service agreement.

In order to ensure that the proposed amended is consistent with Mississippi statutory law and would not make the owner of the DGF fall within the definition of a public utility under MS Code § 77-3-3 (2019), Entegry and Audubon assert that service agreements might have to be limited to a single entity or select subset of offtakers per DGF. MS Code § 77-3-3(d)(i) defines the term “public utility” as follows:

The term “public utility” includes persons and corporations, or their lessees, trustees and receivers now or hereafter owning or operating in this state equipment or facilities for: (i) The generation, manufacture, transmission or distribution of electricity to or for the public for compensation;

Under this statutory definition, public utilities only include entities who generate, manufacture, transmit, or distribute of electricity *for the public*. The term “public” is not defined in the statute. Under traditional principles of administrative law, the regulatory agency tasked with administering the statute has the discretion to interpret any statutory terms that are not defined.

In this case, Entegry and Audubon assert that the “public” should be interpreted within the context of utility regulation. Within the context of utility regulation, the public generally includes all people within a particular service territory without discrimination. Moreover, Black’s Law Dictionary defines the “public” broadly as follows:

Pertaining to a state, nation, or whole community; proceeding from, relating to, or affecting the whole body of people or an entire community. *Open to all*; notorious. Common to all or many; general ; *open to common use*.⁸

Electricity that is generated for a particular customer or a select subset of customers pursuant to a privately negotiated contract is not “open to all” and thus should not be considered “for the public” under MS Code § 77-3-3. Therefore, Entegry and Audubon assert that the Commission has the authority to permit a person or corporation to generate electricity from a DGF for a

⁷ Interconnection Rule, Appendix C (“Whereas, the Interconnection Customer will operate and maintain, or cause the operation and maintenance of the DGF.”)

⁸ <https://thelawdictionary.org/public/>.

particular entity pursuant to a privately negotiated contract or service agreement without falling under the definition of a public utility under § 77-3-3(d)(i).

Interconnection rules and practices are fundamental to DG and DER market development and to securing meaningful access to the benefits of renewable energy generation for customers. Mississippi utilities have little experience in interconnection large numbers and capacities of DER to date. There is much that all stakeholders can learn from jurisdictions that have interconnected large quantities of DERs, so with attention to and application of best practices from other jurisdictions, Mississippi can avoid the problems of customer frustration, unnecessary cost, and excess delay that others have seen.

Recommendation: Entegrity and Audubon recommend that the Commission take specific action on each of these critical issues.

1. The Commission should adopt a broad definition of net metering for DGFs that will allow for meter aggregation in a wide range of structural approaches.
 2. The Commission should require that compensation for DGF exports and operations be grounded on a transparent, comprehensive evaluation of benefits and costs conducted in accordance with guidance provide in the National Standard Practice Manual for Benefit-Cost Assessment of Distributed Energy Resources ("NSPM-DER") See attached NSPM-DER overview (Appendix B).
 3. The Commission should amend the Net Metering rule by expanding the definition of RENMIC to explicitly authorize third-party (non-customer) ownership of DGFs, and to authorize participation in net metering arrangements under service and other contract relationships between the customer and the DGF owner and/or operator.⁹
 4. The Commission should establish legacy rights (or "grandfathering") for DG customers to participate in an approved net metering tariff structure for a period not less than 30 years from the start date for service based on useful life of 25-40 years and a common warranty period of 25 years.¹⁰ Customers should enjoy the privilege of making an irrevocable decision to opt into new net metering rate designs as they are approved by the Commission.
 5. The Commission should establish a process to regularly review practice under interconnection regulations and to periodically revise and improve interconnection rules as the DER markets evolve.
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3. **What, if any, modifications to the Net Metering and Interconnection Rules would incentivize increased participation by both net metering customers and industry providers such as developers, designers, installers and maintenance providers for distributed generation facilities?**

⁹ Entegrity and Audubon believe that third-party operation of DGFs is authorized and contemplated under Appendix C of the Interconnection Rule.

¹⁰ The National Renewable Energy Laboratory, (finding that solar photovoltaics have a useful life of 25 to 40 years), available at <https://www.nrel.gov/analysis/tech-footprint.html>.

Response: Streamlined application and review processes; published and regularly updated hosting capacity maps and data; one-click data access; frequently updated application processing portals.

Discussion: Decision making and development in DER markets is data intensive. Delays and obstacles in obtaining essential information from utilities can be frustrating to customers, developers, and service providers, especially in emerging market segments. In addition, the high up-front fixed costs associated with development means that the consequences of project delay or cancellation can be significant. As Entegrity and Audubon pointed out in response to Question 2, regulatory certainty is essential for sustainable market growth. Regulation also has a role to play in ensuring that utility system operators also provide a stable and information-rich platform for DER development, especially for development of DGFs. Developers and customers need to know where they stand in application and review processes so that they can coordinate financing and other activities. Hosting capacity—the technical ability to interconnect DG and other DERs without the need for significant system upgrades—must be known early in the project development process in order to ensure that development costs can be reliably estimated. Customers and service providers must have one-click access to customer usage information and data in order to properly size and design DG and DER solutions and optimize system investments. And all information must be readily accessible through easy-to-use information portals that track application processing issues and approvals.

Recommendation: Entegrity and Audubon recommend that the Commission address these issues as described below.

1. The Commission should direct the utilities that it regulates to develop common application processing and review procedures. These procedures should be risk-based. Low risk projects and process steps should be streamlined and automated where possible. Simple errors should be identified quickly and correctable mid-process. Fees should be transparent and directly related to caused costs and actual effort required, published in an open-book line item table of fees approved by the Commission. The Commission should not allow utilities to unilaterally implement new fees without Commission approval.
2. The Commission should create an environment in which locational value and grid congestion issues are known and knowable at the earliest stages of development decision making through regularly updated hosting capacity maps and data. Hosting capacity maps and data should be public, at the feeder level resolution, and regularly updated by the utility operating the distribution grid.
3. The Commission should direct utilities to implement one-click access by customers and service providers approved by customers to electricity usage data. Green Button or equivalent systems should be used to promote statewide market development and customer engagement.
4. The Commission should direct utilities to build and maintain application processing information portals that are updated at least daily for access by customers and DER developers. Information available at such portals should include application progress, application processing issues or deficiencies, preliminary interconnection queue status, anticipated application processing completion date, and other relevant information.

4. What, if any, modifications to the Net Metering and Interconnection Rules should the Commission consider to increase low-income access to, and participation in, net metering?

Response: See Entegriy and Audubon comments and recommendations to other Commission questions in this proceeding.

Discussion: Improving low-income customer access to and participation in net metering adds special challenges and considerations for the Commission in this proceeding. Given the potential benefits to the people of Mississippi of such improvements, including to non-low income customers and the utilities, special attention and effort is more than justified.

Low-income access to net metering and the benefits of DG is limited by a number of factors including customer awareness, home ownership, roof suitability, usage level, credit access, energy inefficiency, and trust and business relationship experience, and others. At the same time, access to net metering can improve affordability, bill stability, local economic development benefits, grid reliability, property values, community pride, and elements of the public interest.

Entegriy and Audubon note that improving meaningful access to renewable energy alternatives for all customers will ultimately benefit low-income customers as well, especially changes that allow flexibility in service, lease, or ownership structure. In addition, a robust DG market serving public entities, like local governments and school district can have the benefits of reducing tax burdens and generating economic development at the community level.

Recommendation: See Entegriy and Audubon comments and recommendations to other Commission questions in this proceeding.

5. What, if any, modifications to the Net Metering and Interconnection Rules should the Commission consider to better enable commercial and industrial enterprises to self-supply?

Response: See Entegriy and Audubon comments and recommendations to Questions 2 and 3.

Discussion: There is huge diversity in the commercial and industrial sectors, once again countenancing regulatory flexibility in securing net metering or self-generation services under a wide range of structural arrangements. Commercial and industrial enterprises place a high priority on regulatory and economic stability regarding investment or participation in DGF projects, especially because such decisions are not typically core to the business function in which such customers are engaged. Such customers also place a premium on information and process status aspects of project participation.

Recommendation: See Entegriy and Audubon comments and recommendations to Questions 2 and 3.

6. What, if any, modifications should be made to the annual reporting requirements of the current Net Metering Rule?

Response: Forward-looking projections of DG market penetration based on DGF operating data, applications character and volume, hosting capacity analysis, and other factors should be included in annual reports. Annual reports should also be used to report “meaningful access” metrics data.

Discussion: As currently provided in the Commission’s Net Metering rule, a development “cliff” will be experienced when DG penetration rates reach a certain level. In addition, market dynamics (including pricing and demand) are affected by the proximity to such a cliff.

As described in Entegri and Audubon responses to Question 3, increased information about applications and processing will be helping in supporting rational market growth. This information will also be helpful in preparing when markets reach target size, especially as an early opportunity to address the merits of continuing with the target or adjusting it.

Entegri and Audubon also reiterate comments in response to Question 1, that decisions and rules relating to net metering and interconnection should be grounded in data, especially data relating to whether customers enjoy meaningful access to net metering for renewable energy alternatives.

Recommendation: Entegri and Audubon recommend that the Commission direct utilities to include statistical estimates of future market growth and rate of growth in annual net metering reports, and that utilities include data relating to “meaningful access” metrics as recommended in response to Question 1.

As discussed in response to Question 7, Entegri and Audubon recommend a substantial increase in the current 3% target, to 10%, and the addition of a requirement that utilities demonstrate that a curtailment of net metered DGF growth is the reasonable course of action.

7. Should the Commission modify or remove the existing cap(s) on total installed net metering capacity?

Response: Yes; the cap should be removed or at least substantially increased. Any cap should not result in automatic termination of net metering or interconnection applications by the utility.

Discussion: Net metering caps are largely an unnecessary carryover from the days in which utilities lacked the experience and technical capacity to efficiently integrate DG into distribution systems and in which regulators lacked tools for effectively evaluating the net benefits or costs of DG development and operations.

It remains appropriate for utilities and the Commission to monitor DGF development and operations in order to gain early insight into costs and benefits accruing from those facilities, but capacity caps create serious market distorting impacts that can be avoided by prudent monitoring of grid conditions.

Moreover, new technologies such as distribution automation and management technologies and grid protection technologies like backflow preventers and controllable smart inverters provide utilities with powerful tools to manage distribution system operations without draconian caps.

Therefore, capacity caps should be considered target numbers for measuring market growth, not for limiting markets, perhaps even forming the basis for performance incentives for utilities that facilitate rapid growth while maintaining safety, affordability, and reliability. At the very least, caps or targets should be used to inform the commencement of proceedings to evaluate a utility's proposed course of action: to suspend new applications, to install new grid modernization systems or infrastructure, or to reset the target at a higher level.

Recommendation: Entegrity and Audubon recommend that the Commission raise the current net metering capacity cap to 10% and include a provision in the rule requiring the relevant utility to prove that suspending new net metering applications is the prudent course in light of other alternatives. More broadly, the Commission should consider instituting a requirement that utilities conduct Distributed Energy Resource Planning (in addition to utility Integrated Resource Planning, and with plans to coordinate both planning efforts) in order to identify long-term distribution infrastructure requirements and non-wires solutions relating to DG/DER development and operations, and track data from interconnection activities in order to characterize any incremental net costs or operational concerns arising from growth in DG/DER deployment.

8. Should the Commission modify the timing or manner in which net metering customers are credited or compensated for excess energy exported to the grid?

Response: The Commission should reevaluate the timing and manner of net metering crediting and compensation for excess energy exports.

Discussion: Net metering customers export energy as an incident to generation “for use.” That is, net metering customers are not in the business of generation “for sale for resale” as wholesale generators are. Net metering customers typically exercise very little control over either the timing and level of generation or the precise timing and level of energy consumption. Net billing, in which only generation that instantaneously offsets consumption earns full retail credits, provides no meaningful price signal to net metering customers. At worst, net billing with export compensation rates lower than the retail rate creates a perverse incentive for customers to move consumption to periods of solar peak—which in the summer coincide significantly with system peak and high cost of service.

Under the Commission's current net metering rules, compensation levels are not set based on the results of a BCA that accounts for the full range of costs and benefits—the value—of DGF exports. Net metering export compensation rates are not indexed against the hourly cost of energy and capacity or adjusted on a seasonal basis. Net metering compensation rates also lack a locational component, including a component based on the value of grid services. Net metering export rates do not account for smart inverter functionality and the opportunity to obtain ancillary services from DGFs.

In all, this proceeding provides an excellent opportunity for the Commission to explore modifications that would improve the fairness and economic efficiency of net metering credits and compensation.

Because all of these improvements and amendments would likely increase the compensation rate to net metering customers, and because the Commission's study of costs and benefits in 2014 showed that benefits exceed the retail rate, the Commission should begin to conduct or require the development of a BCA framework consistent with the guidance in the NSPM-DER, as recommended in the Entegry and Audubon recommendation in response to Question 2.

Recommendation: Entegry and Audubon recommend that the Commission proceed as follows.

1. The Commission should lead utilities and other stakeholders in the development of a BCA Framework in accordance with the guidance in the NSPM-DER for use in conducting transparent and comprehensive assessments of the costs and benefits of rates and programs relating to DG, of DG with storage, of DG with EE, and other appropriate combinations of measures.
2. The Commission should direct that the utilities increase the compensation credit rate for exported energy to the retail consumption rate otherwise applicable to the customer on an interim basis until the capacity of installed net metered DG reaches eight percent of the utility's coincident system peak, at which time the utility must conduct and obtain Commission approval for a BCA analysis for DG as a condition of proposing any modifications of DG compensation rates.

9. What measures or mechanisms could most equitably reduce the upfront cost burdens faced by customers interested in self-supply through net metering?

Response: See Entegry and Audubon responses to Questions 2, 3; reduce fixed customer charges; enhance customer education and awareness especially in utility communications; accelerate and strengthen energy efficiency programs; enable and strengthen community / shared solar program offerings; encourage the development of innovative financial tools and services including green banking, property-assessed clean energy ("PACE") financing, pay-as-you-go services, and pay-as-you-save services.

Discussion: Almost every customer comes to the DG and DER markets in their own unique manner, especially very early-stage markets like those that exist in Mississippi. As a result, every aspect of the "sales cycle" for DG investment and participation must be evaluated and addressed to create a path toward self-sustaining markets for DG and other DERs.

High fixed customer charges are a power economic and financial barrier to customer adoption of DG, energy efficiency, and all manner of DER products and services.

Customers need reliable, objective information and tools with which to evaluate product and service offerings. They need honest brokers of information, especially in the communications provided by incumbent monopoly utilities.

Energy efficiency is the least expensive way to reduce the cost and improve the overall economics of DG investments and program participation. Innovative service providers like Entegrity provide DG and EE services together to maximize customer benefits and minimize costs. Enhanced energy efficiency programs for all customers will expand the market for DG and other DERs.

Community or shared solar subscription services are an extremely valuable tool for expanding customer access to renewable energy services. The excellent economics of aggregation in general provide a mechanism to build in expanded enrollment options, especially for low- and moderate-income customers.

Finally, states with a strong commitment to DER market growth have realized great value in advancing creating financial institutions, mechanisms, and approaches. These innovative financing options leverage the long-term price stability and low operating costs of DG as well as the high availability and reliability of these resources to provide more customers with meaningful access to renewables. In some states, “green banks” provide secondary market guarantees to reduce interest expense and other financial support for emerging markets. Other innovative programs, like property-assessed clean energy and pay-as-you-go/save, reduce or eliminate up-front costs and while securing financial obligations made by customers.

Recommendation: Entegrity and Audubon recommend that the Commission adopt recommendations in their responses to Questions 2 and 3. In addition, the Commission should consider the following action steps:

1. Enhance customer education and awareness, especially utility communications regarding net metering.
2. Review and reduce fixed customer charges.
3. Accelerate and expand energy efficiency programs.
4. Enable and expand community / shared solar programs.
5. Explore and develop innovative financial support, institutions, products, and services.

10. What role, if any, should the Mississippi Public Utilities Staff serve in reviewing facilities studies for Level 2 and/or 3 interconnections?

Response: The Mississippi Public Utilities Staff should serve as an honest broker and convenor for addressing issues raised in facilities studies.

Discussion: Facilities studies for interconnection can be extremely costly in terms of time and effort. Often the single best way to improve the processes and avoid problems is to increase the flow of quality information about the process and in each step of the process.

In general, technical issues should be addressed with clear requirements based on data and engineering requirements and best practices gleaned from experiences in states with larger DG markets.

Because of the added complexity of Level 2 and Level 3 interconnections, several steps can be taken to improve or maintain associated processes, and the Public Utilities Staff can and should assume responsibility to serve as an honest broker and convenor for these processes.

Recommendation: Entegrity and Audubon recommend that the Commission charge the Public Utilities Staff with serving as an honest broker and convenor for addressing issues raised in review of Level 2 and Level 3 interconnection studies. Specifically, the Staff should:

1. Enforce timing and transparency.
2. Provide a venue for rapid dispute resolution.
3. Host quarterly meetings to review successful and problematic interconnection application processing.
- 4.

Additionally, the threshold capacity levels for Level 1 and Level 2 review should be modified for consistency with the Interstate Renewable Energy Council's Model Interconnection Procedures by:

1. Increasing the maximum generating capacity for Level 1 review to 25 kW; and
2. Increasing the maximum generating capacity for Level 2 review to 5 MW.¹¹

11. In light of the Commission's recent approval of advanced metering infrastructure (AMI) for Entergy and Mississippi Power Company, are bi-directional meters still needed for effective net metering?

Response: It is not clear that bi-directional meters without incremental data logging and collection provide any useful data that cannot be obtained with advanced metering infrastructure or that is needed for net metering.

Discussion: Entegrity and Audubon understand the term "bi-directional meters" to describe meters with two separate cumulators, one each for imports and exports. This kind of meter supports the net billing or 2-channel billing currently in place because it provides a billing determinant for each of the two applicable rates, the import rate and the export rate.

AMI provides, if properly configured, the opportunity to obtain readings in increments smaller than the billing period. AMI can provide other functionality, but only if those functions are activated and deployed, and if the utility also deploys adequate complementary infrastructure and storage and retrieval capabilities. That means that AMI can, if properly configured and deployed, provide customers with more information about their consumption and the utility with more information about the temporal and locational value of customer actions, including generation, storage charging, storage discharge, demand response, and other functions. (This is also a reason that the cost of AMI should not be allocated only to customer costs.)

¹¹ Interstate Renewable Energy Council, Model Interconnection Procedures, 2019, pp. 7-11, available at <https://irecusa.org/publications/irec-model-interconnection-procedures-2019/#>.

True net metering does not require bi-directional meters because the netting is monthly and not net billing based on separate cumulator channels. Bi-directional meters are a convenient way to apply rates that differ for consumption and generation but has limited value if consumption and exports are not recorded against specific increments of time in specific locations on the grid. AMI data logging at small increments of time can provide more value for application in enhanced net metering that compensates customers for locational and temporal value, and with small enough increments (5, 10, or 15 minutes) can support not only enhanced price for DG, but also participation in time-varying rates, demand response, and other rate options.

Recommendation: Remove the reference to 2-channel billing in Section 110 of Chapter 3 of the Net-Metering Rule to clarify that 2-channel billing is not required.

- 12. To the extent a commenter proposes a new or different compensation scheme, please explain how that proposal would directly affect a Mississippi customer's ability to self-supply. Answers to this question should include any relevant studies, surveys, financial modeling or other specific data-driven evidence supporting the position.**

Response: See Entegrity and Audubon responses to Questions 2, 3, 8; Appendix B.

Discussion: Entegrity and Audubon assert that the foundation for fair and reasonable compensation for DGF operations, including energy exports, must be based on a transparent, data-driven, and comprehensive assessment of the benefits and costs of those operations.

As discussed in detail in Appendix B, best practices in BCA methods have become sufficiently well-established to be set forth in the NSPM-DER. The best approach is for the Commission to mandate and support the development of a Mississippi jurisdictional test and embed that in a BCA Framework that can be used to not only inform a fair and reasonable compensation rate for DG, but also for other DERs, and for DERs deployed in combination.

Recommendation: Entegrity and Audubon recommend that the Commission direct and support the establishment of a BCA Framework for use in setting net metering compensation rates and assessing other DERs as well. As explained in response to Question 8, Entegrity and Audubon also recommend that the Commission set the compensation rate for exports at the retail consumption rate until such time as a transparent and comprehensive BCA for DG and other DERs can be completed.

- 13. Should the Net Metering Rule incorporate uniform rules or standards applicable to community solar projects and, if so, in what way and to what extent?**

Response: Yes, as part of an effort to accelerate growth of the community solar sector in Mississippi.

Discussion: Community solar in Mississippi should be a key strategy in the effort to expand access to renewable energy, especially for low- and moderate-income customers, renters, not-for-profit entities, churches, and others. However, Community solar projects pose special challenges for developers and service providers. They require the education and recruitment of multiple

subscribers as well as the development of DGFs that are larger than typical behind-the-meter facilities. As a market sector that is very much at the cutting edge of emergence, community solar development will benefit greatly from a uniform set of rules and / or standards. These rules and standards should apply to customers, developers, subscriber organizations, and, importantly, to utilities.

Entegrity and Audubon understand that other parties intend to submit comprehensive proposals for community solar project rules and / or standards and look forward to engaging with those stakeholders to realize the potential of such proposals through creation of a vibrant community solar market sector in Mississippi.

Recommendation: The Commission should take advantage of the community solar model rule proposal offered by the Mississippi Chapter of the Sierra Club and move quickly to adopt rules. Entegrity and Audubon will offer specific recommendations as part of the process.

14. Should the Commission continue to condition a customer's receipt of the additional compensation allowed by the non-quantifiable benefits adder on the customer's voluntary transfer of their REC ownership?

Response: No.

Discussion: RECs typically represent the non-energy attributes of renewable energy generation. Nothing in existing utility net metering rates reflects a fair calculation of the value of those attributes. The utilities do not compensate net metering customer for RECs. As a result, the requirement that customers surrender RECs in return for service under the net metering tariff is confiscatory. Utilities therefore have no legitimate basis for interfering in generator or offtaker decisions about disposition of RECs.

Recommendation: The Commission should amend its net metering rules to prohibit the confiscation of RECs as a mandatory condition of net metering service and prohibit the utilities from interfering in generators' or offtakers' decisions regarding disposition or sale of RECs.

15. Should the Commission permit meter aggregation by a single net metering customers owner?

Response: Yes.

Discussion: See Entegrity and Audubon comments in response to Questions 2, 4, 5.

Recommendation: See Entegrity and Audubon recommendations in response to Questions 2, 4, 5, and Appendix A.

16. How could the Net Metering Rule most effectively and accurately incorporate new or developing distributed energy resources, such as battery storage?

Response: See Entegrity and Audubon comments in response to Questions 2, 12, Appendix B.

Discussion: A Mississippi-specific jurisdictional BCA Framework will provide the structure through which to evaluate and develop rules and rates to address other DERs, such as storage, besides DG. A single Framework approach will ensure that evaluations are consistent across the state and across technologies.

Recommendation: Entegrity and Audubon recommend that the Commission direct and support the establishment of a BCA Framework for use in setting net metering compensation rates and assessing other DERs as well.

17. What role, if any, should the Commission's Joint Solar Safety and Net Metering Working Group continue to serve going forward?

Response: None.

Discussion: None.

Recommendation: None at this time.

18. What measures and mechanisms should the Commission consider to better enable schools, state and local government bodies, and other non-profit or tax-exempt entities to participate in net metering?

Response: See Entegrity and Audubon responses to Questions 1, 2, 3, 5, 8, 9, 10, 12, 14, 15, 16.

Discussion: Entegrity and Audubon strongly support development of net metering opportunities and DGF for schools, government bodies, and other non-profit and tax-exempt entities. Service to these customers is core to Entegrity's business model in particular. Therefore, responses by Entegrity and Audubon to the majority of the Commission's questions in this proceeding were crafted with these customers in mind.

Recommendation: See Entegrity and Audubon recommendations in response to Questions 1, 2, 3, 5, 8, 9, 10, 12, 14, 15, 16.

Appendix A – NSPM-DER Overview

NATIONAL STANDARD PRACTICE MANUAL FOR BENEFIT-COST ASSESSMENT OF DISTRIBUTED ENERGY RESOURCES (“NSPM-DER”)

NSPM-DER OVERVIEW

BENEFIT-COST ANALYSIS AS A FOUNDATION FOR NET METERING RATES

The best and most common place for the Commission to start is by ensuring that any net metering rate proposals rest upon a transparent and comprehensive assessment of the costs and benefits of customer generation through Benefit-Cost Analysis (“BCA”). A growing number of jurisdictions have used the analogous Value of Solar analysis approach to inform and support net metering rate decisions.¹ Best practices from other jurisdictions that regulate multiple utilities countenance the Commission undertaking analysis through a common analytical framework that can also incorporate utility-specific facts and circumstances.

Utilizing a common framework for BCAs aligns with tenets of sound rate making, including ease of understandability and application, and provides greater confidence that rates will track cost causation and fairly apportion costs. And importantly, a common framework approach to evaluating costs and benefits will support efficient and rational statewide market development for distributed generation (“DG”) and other distributed energy resources (“DER”).

¹ Many states have conducted Value of Solar studies of one form or another. States that have existing studies include: Arizona (2016 and 2013); Arkansas (2017); California (2016, 2013, 2012, 2011, 2010, 2005); Colorado (2013); Florida (2005); Hawaii (2014); Iowa (2016); Louisiana (2015); Massachusetts (2015); Maine (2015); Mississippi (2013); North Carolina (2014); Nevada (2017, 2014); New Jersey and Pennsylvania (2012); New York (2012 and 2008); South Carolina (2015); Texas (2014), including for the cities of San Antonio (2013) and Austin (2006); Utah (2014); Vermont (2014); Virginia (2014); and Wisconsin (2016). Other states have conducted dockets and processes for establishing a Value of Solar methodology or framework, such as: Minnesota (2014); Rhode Island (2015); and New York (2016). Solar Energy Industries Association, *Solar Cost-Benefit Studies*. Available at: <https://www.seia.org/initiatives/solar-cost-benefit-studies>.

The concept of standardized BCA frameworks goes back nearly 40 years in the U.S., when the California Standard Practice Manual was published in 1983.² Indeed, the common use of standardized frameworks to evaluate energy efficiency programs has improved the stock and performance of such programs to the extent that it is now common knowledge that efficiency is the least expensive energy resource everywhere.

Over the past 40 years, state regulatory commissions have developed, shared, and adopted common methods and evaluation frameworks for calculating wholesale avoided cost rates. While each state adapts these methods to address specific local conditions, a strong non-utility wholesale generation sector has emerged in many states, saving customers significant amounts of money.

A Value of Solar study is appropriately understood as a technology-specific BCA. As already noted, the Value of Solar concept is at heart a BCA, specialized to distributed solar production. As early as 2013, when the Interstate Renewable Energy Council (“IREC”) published the “A Regulator’s Guidebook: Calculating the Benefits and Costs of Distributed Solar,”³ the methods and metrics of best practices Value of Solar studies were already identifiable. That reference lists the key categories of impacts that should be assessed and describes methods to quantify those impacts. Transparent and comprehensive evaluations of the value of solar and of DERs have tracked the guidance in the Regulator’s Guidebook to describe and quantify costs and benefits resulting from the production of energy by DG facilities over the useful life of facilities. It is important to note that the most useful reports use a fairly standardized analysis framework and transparently document the methods chosen for calculating costs and benefits.

² See, generally, California PUC, *California Standard Practice Manual*, Regulatory Assistance Project (Oct. 1, 2001), available at: <https://www.raponline.org/knowledge-center/california-standard-practice-manual/>.

³ J. Keyes & K. Rábago, *A Regulator’s Guidebook: Calculating the Benefits and Costs of Distributed Solar*, Interstate Renewable Energy Council-IREC (Oct. 2013), available at: http://www.irecusa.org/wp-content/uploads/2013/10/IREC_Rabago_Regulators-Guidebook-to-Assessing-Benefits-and-Costs-of-DSG.pdf.

The “gold standard” for such analysis is the work done in Minnesota, by Clean Power Research, published in 2014.⁴ That report was the product of a multi-stakeholder process and the report fully documents the methods and results. The study was reviewed multiple times by the Minnesota Public Service Commission, and the methodology was adopted for informing compensation rates for community solar projects. Today, the Minnesota Community Solar program leads the nation.⁵ The valuation is regularly updated using a public process, another benefit of adopting a framework approach to benefit-cost analysis.

There are other examples of the benefits that a standardized BCA framework approach offers. During the past fifteen years, utilities have invested billions of dollars through smart grid, grid modernization, and/or power sector transformation initiatives. Standardized BCA frameworks have been central to the leading efforts in this regard. Perhaps one of the most comprehensive transformation initiatives was that initiated by New York, styled New York REV (for “Reforming the Energy Vision”). This proceeding resulted in the institution of a Value of DER proceeding and comprehensive distribution system planning processes that included a BCA Framework.⁶ In the words of the NY Commission’s order, the BCA Framework was premised on a number of foundational principles which the Commission should consider adapting and adopting for Mississippi:

The BCA analysis should: 1) be based on transparent assumptions and methodologies; list all benefits and costs including those that are localized and more granular; 2) avoid combining or conflating different benefits and costs; 3) assess portfolios rather than individual measures or investments (allowing for consideration of potential synergies and economies among measures); 4) address the full lifetime of the investment while

⁴ Clean Power Research, *Minnesota Value of Solar: Methodology*, Minnesota Department of Commerce (Mar. 2014), available at: <https://www.cleanpower.com/research/economic-valuation-research/>.

⁵ See J. Farrell, *Why Minnesota’s Community Solar Program is the Best*, Institute for Local Self-Reliance (5 Feb. 2021—updated monthly), available at: <https://ilsr.org/minnesotas-community-solar-program/>.

⁶ See NY PSC, *Order Establishing the Benefit Cost Analysis Framework*, Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (Jan. 21, 2016), available at: <https://www3.dps.ny.gov/W/PSCWeb.nsf/All/C12C0A18F55877E785257E6F005D533E>.

reflecting sensitivities on key assumptions; and, 5) compare benefits and costs to traditional alternatives instead of valuing them in isolation. ⁷

Another example is the Docket 4600 proceeding conducted by the Rhode Island Public Utilities Commission from 2016 to 2017.⁸ The RI PUC initiated that proceeding, informed by a multi-party stakeholder working group's work, to seek answers to several questions, notably:

What attributes are possible to measure on the electric system and why should they be measured? This overarching question can be further broken down into three broad questions:

- 1. What are the costs and benefits that can be applied across any and/or all programs, identifying each and whether each is aligned with state policy?*
- 2. At what level should these costs and benefits be quantified—where physically on the system and where in cost-allocation and rates? and*
- 3. How can we best measure these costs and benefits at these levels—what level of visibility is required on the system and how is that visibility accomplished?*⁹

In 2017, the RI Docket 4600 working group delivered to the RI PUC a final report that addressed two key topics, namely, (1) how to better evaluate the benefits and costs of a wide range of technologies, programs, and investments; and (2) how rate design should evolve in Rhode Island over time.¹⁰ The RI Docket 4600 Stakeholder Working Group, which included utility, developer, consumer, regulatory, and economic development stakeholders, delivered a report that established a Rhode Island Benefit-Cost Framework and several rate design recommendations.¹¹

⁷ *Id.* at 2.

⁸ RI PUC, In Re: Investigation into the Changing Distribution System and the Modernization of Rates in Light of the Changing Distribution System, Docket No. 4600. Documents available at: <http://www.ripuc.ri.gov/eventsactions/docket/4600page.html>.

⁹ RI PUC Docket No. 4600, *Notice of Commencement of Docket and Invitation for Stakeholders Participation*, RI PUC (Mar. 18, 2016), available at: <http://www.ripuc.ri.gov/eventsactions/docket/4600page.html>.

¹⁰ Raab Associates, et al., *Docket 4600: Stakeholder Working Group Process Report to the Rhode Island Public Utilities Commission*, RI PUC Docket No. 4600 (Apr. 5, 2017), available at: http://www.ripuc.ri.gov/eventsactions/docket/4600-WGReport_4-5-17.pdf.

¹¹ *Id.*

The RI PUC accepted the report and issued directives for further work in July 2017.¹² The process and RI PUC orders set the stage for power sector transformation work that was a priority for that state.

It is important to note that establishing a BCA Framework has value even in states that are not pursuing a power sector transformation agenda. A BCA Framework can lead to clarity in understanding and communication between utilities, regulators, and stakeholders about benefit and cost impacts. A BCA Framework is essential to establishing fair, just, and reasonable rates for DER services and technologies. A BCA Framework can provide a platform for evaluating and prioritizing grid modernization and other investment decisions. A BCA Framework can provide a mechanism for examining interactive, portfolio, and competitive effects between programs and rate structures. And, over the long-term, a BCA Framework can provide essential analytical rigor to agendas as big as utility sector transformation. The instant proceeding and the questions raised by the Commission provide all the justification necessary for the Commission to develop and propose a BCA Framework.

While the examples are illustrative and not exhaustive, they reveal the benefits of using a BCA Framework approach to address many of the most important issues facing electric utility regulators and electric utilities today. A consistent and well-structured BCA Framework can be applied to program evaluation, investment decision making, and rate design.

The Commission should direct the development of a BCA Framework as the foundation for any action to inform net metering reform. Ideally, the BCA Framework should be developed by Commission staff with full opportunity for involvement by stakeholders and utilities. Then, any new tariff design should be aligned with the BCA analysis results.

¹² RI PUC, *PUC Report and Order No. 22851 Accepting Stakeholder Report*, RI PUC Docket No. 4600 (Jul. 31, 2017), available at: http://www.ripuc.ri.gov/eventsactions/docket/4600-NGrid-Ord22851_7-31-17.pdf.

BCA FRAMEWORK RECOMMENDATIONS

The decades of work invested in sound BCA processes have yielded a consensus among leading practitioners as to the elements of best-practices BCAs. That consensus is documented in the National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources (“NSPM-DER”), published by the National Energy Screening Project,¹³ published in August of 2020.

The NSPM-DER is a comprehensive document that includes guiding principles, recommended process steps, impact category lists, definitions, and specific guidance on a wide range of issues associated with developing a BCA Framework and conducting cost effectiveness analysis. It would be wise for the Commission and Mississippi’s utilities to take advantage of the comprehensive and integrated nature of its recommendations.

The entire NSPM-DER guidance document is 300 pages in length, including several appendices. In this testimony I only highlight key elements of the entire NSPM-DER that the Commission should direct the Companies to follow. First, the NSPM-DER sets out eight guiding principles that the Companies should be directed to follow. These principles are summarized as follows:¹⁴

Principle 1 - Treat DERs as a Utility System Resource.

DERs are one of many energy resources that can be deployed to meet utility/power system needs. DERs should therefore be compared with other energy resources, including other DERs, using consistent methods and assumptions to avoid bias across resource investment decisions.

¹³ T. Woolf, et al, *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources*, National Energy Screening Project (Aug.. 2020). Available at: <https://www.nationalenergyscreeningproject.org/national-standard-practice-manual/>. While the NSPM-DER was published recently, it reflects best practices articulated in a prior NSPM for efficiency resources and generally recognized in the industry.

¹⁴ NSPM-DER Ch. 2.

Principle 2 - Align with Policy Goals

Jurisdictions invest in or support energy resources to meet a variety of goals and objectives. The primary cost-effectiveness test should therefore reflect this intent by accounting for the jurisdiction's applicable policy goals and objectives.

Principle 3 - Ensure Symmetry

Asymmetrical treatment of benefits and costs associated with a resource can lead to a biased assessment of the resource. To avoid such bias, benefits and costs should be treated symmetrically for any given type of impact.

Principle 4 - Account for Relevant, Material Impact

Cost-effectiveness tests should include all relevant (according to applicable policy goals), material impacts including those that are difficult to quantify or monetize.

Principle 5 - Conduct Forward-Looking, Long-term, Incremental Analyses

Cost-effectiveness analyses should be forward-looking, long-term, and incremental to what would have occurred absent the DER. This helps ensure that the resource in question is properly compared with alternatives.

Principle 6 - Avoid Double-Counting Impacts

Cost-effectiveness analyses present a risk of double-counting benefits and/or costs. All impacts should therefore be clearly defined and valued to avoid double-counting.

Principle 7 - Ensure Transparency

Transparency helps to ensure engagement and trust in the BCA process and decisions. BCA practices should therefore be transparent, where all relevant assumptions, methodologies, and results are clearly documented and available for stakeholder review and input.

Principle 8 - Conduct BCAs Separately from Rate Impact Analyses

Cost-effectiveness analyses answer fundamentally different questions from rate impact analyses, and therefore should be conducted separately from rate impact analyses.

The NSPM-DER also lays out the following process steps for developing and conducting a BCA:¹⁵

STEP 1 - Articulate Applicable Policy Goals

Articulate the jurisdiction's applicable policy goals related to DERs.

STEP 2 - Include All Utility System Impacts

Identify and include the full range of utility system impacts in the primary test, and all BCA tests.

STEP 3 - Decide Which Non-Utility System Impacts to Include

Identify those non-utility system impacts to include in the primary test based on applicable policy goals identified in Step 1:

- *Determine whether to include host customer impacts, low-income impacts, other fuel and water impacts, and/or societal impacts.*

STEP 4 - Ensure that Benefits and Costs are Properly Addressed

Ensure that the impacts identified in Steps 2 and 3 are properly addressed, where:

- *Benefits and costs are treated symmetrically.*
- *Relevant and material impacts are included, even if hard to quantify.*
- *Benefits and costs are not double counted.*

¹⁵ NSPM-DER Ch. 3.

- *Benefits and costs are treated consistently across DER types.*

STEP 5 - Establish Comprehensive, Transparent Documentation

Establish comprehensive, transparent documentation and reporting, whereby:

- *The process used to determine the primary test is fully documented.*
- *Reporting requirements and/or use of templates for presenting assumptions and results are developed.*

The NSPM-DER lists utility system impacts that may result for DER operations that should be considered in every case in order to perform a BCA in accordance with best practices.¹⁶

Generation - Energy generation

Generation – Capacity

Generation - Environmental compliance

Generation - RPS/CES compliance

Generation - Market price effects

Generation - Ancillary services

Transmission - Transmission capacity

Transmission - Transmission system losses

Distribution - Distribution capacity

Distribution - Distribution system losses

Distribution - Distribution operations and maintenance

Distribution - Distribution voltage

General - Financial incentives

¹⁶ NSPM-DER Ch. 4.

General - Program administration

General - Utility performance incentives

General - Credit and collection

General – Risk

General - Reliability

General – Resilience

The NSPM-DER lists host customer and societal impacts that may result for DER operations that may be considered, according to jurisdictional policy preference, in order to perform a BCA in accordance with best practices.¹⁷

Host Customer - Host portion of DER costs

Host Customer - Host transaction costs

Host Customer - Interconnection fees

Host Customer - Risk

Host Customer - Reliability

Host Customer - Resilience

Host Customer - Tax incentives

Host Customer - Non-energy impacts

Host Customer - Low-income customer non-energy impacts

Societal - Resilience impacts beyond those experienced by utilities or host customers

Societal - Greenhouse gas emissions created by fossil-fueled energy resources

Societal - Other air emissions, solid waste, land, water, and other environmental impacts

Societal - Incremental economic development and job impacts

¹⁷ NSPM-DER Ch. 4.

Societal - Health impacts, medical costs, and productivity affected by health

Societal - Poverty alleviation, environmental justice, and reduced home foreclosures

Societal - Energy imports and energy independence

CERTIFICATE OF SERVICE

I, Ryan Burrage, do hereby certify that in compliance with Chapter 6 of the Commission's Rules of Practice and Procedure:

1. An electronic copy of the filing has been filed with the Commission via e-mail to the following address: efile.psc@psc.state.ms.us.
2. An electronic copy of the filing has been served via e-mail to the following addresses:

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This the 5th day of April 2021.

A handwritten signature in black ink, appearing to read "Ryan Burrage". The signature is fluid and cursive, with the first name "Ryan" and last name "Burrage" clearly distinguishable.

Ryan Burrage
Business Development Executive
Entegrity Energy Partners, LLC
1121 North Jefferson Street
Jackson, MS 39202
Ryan.Burrage@EntegrityPartners.com



MISSISSIPPI ASSOCIATION OF SCHOOL SUPERINTENDENTS

March 31, 2021

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174
March 31, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with the awareness and support of the public's interest in Mississippi's public schools. As the Executive Director of the Mississippi Association of School Superintendents, it is one of my responsibilities to advocate for K12 public school districts in the current sense as well as for their development for generations to come.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of a school district's operational budget. Every dollar that is allocated to our traditional nonrenewable energy sources is another dollar that can't be used for instructional staff and strategies that impact student achievement.

Secondly, career pathways leading to the energy sector are expected to be the fastest growing occupation in the coming years. By allowing our students to witness firsthand the nontraditional renewable energy sources of both solar and wind will impact workforce development opportunities for years to come.

I write this letter in full support of Entegry's position statement in this docket. The positions advocated by Entegry will bring economic, environmental, and educational benefits to school districts across the entire state of Mississippi. Allowing public schools to benefit from renewable solar energy is in the public's interest of the entire state now and for years to come.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. G. Burchfield'.

Phillip G. Burchfield, Ed.D.
Executive Director

555 Tombigbee Street, Suite 107 • Jackson, MS 39201
Phone: 601-352-8868 • Fax: 601-487-6491
Email: mass@superintendents.ms

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39225-1174

March 31, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

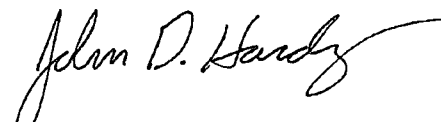
Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Associate Director for Engineering Services at Mississippi State University, it is my job to foster and guide efficient and sustainable development so that the University can continue to meet its educational, research and service goals for years to come.

This docket is of great importance to me and all employees in the state for two reasons. First, electricity spending is a significant portion of the University's operating expenses. Every dollar that we must put towards this line item is another dollar can't be used to improve our facilities and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be some of the fastest growing occupations in the coming years. It is in the best interest of our students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in support of Entegry's position statement in this docket. The positions advocated by Entegry will bring economic, environmental, and educational benefits to the University and the entire state. Allowing public entities like Mississippi State University to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

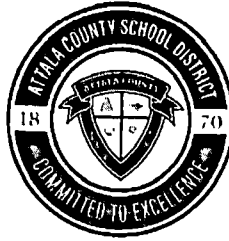
Sincerely,



J.D. Hardy, PE, CEM

Associate Director for Engineering Services
Mississippi State University

*Superintendent: Kyle Hammond
100 Courthouse Building, Suite 3
Kosciusko, MS 39090
Phone: 662-289-2801
Fax: 662-289-2804*



*Board Members
Christie Moody, Pres.
Vernita Rayford, Sec.
Shelia Rone
Janice Dees
Wilson Jackson*

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

March 30, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of Attala County School District, it is my job to oversee the care and development of the next generation.

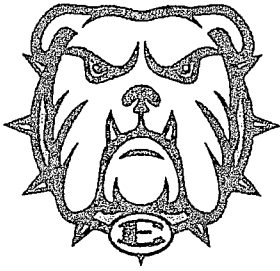
This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in full support of Entegriy's position statement in this docket. The positions advocated by Entegriy will bring economic, environmental, and educational benefits to my school district and the entire state. Allowing schools like Attala County School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,

Kyle Hammond
Superintendent, Attala County School District



Enterprise School District

Josh Perkins, Superintendent

503 River Road
Enterprise, Mississippi 39330

601.659.7965 (office) 601.659.3254 (fax)

www.esd.k12.ms.us

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

March 30, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of the Enterprise School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in full support of Entegriy's position statement in this docket. The positions advocated by Entegriy will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like the Enterprise School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,

Josh Perkins

Superintendent, Enterprise School District

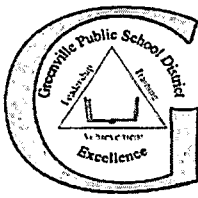
Every Child



Every Classroom



Every Day



Greenville Public School District

Dr. Debra Dace, Superintendent

ddace@gpsdk12.com

"Committed to Excellence for All"

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

March 30, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of Greenville Public School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

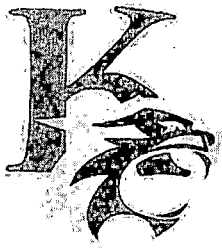
I write this letter in full support of Entegry's position statement in this docket. The positions advocated by Entegry will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like Greenville Public School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,

Dr. Debra Dace

Greenville Public School District

412 South Main Street
Greenville, Mississippi 38701 662-334-7000 Phone 662-334-3646 Fax



KEMPER COUNTY SCHOOLS

Office of the Superintendent of Education

Hilute Hudson, Superintendent

Post Office Box 219

DeKalb, Mississippi 39328

Phone (601) 743-2657

Fax (601) 743-9297

March 31, 2021

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of Kemper County School District, it is my job to oversee the care and development of the next generation.

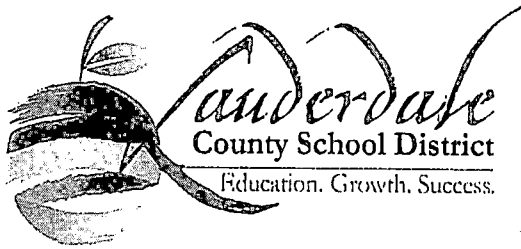
This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in full support of Entegriety's position statement in this docket. The positions advocated by Entegriety will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like Kemper County School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,

Hilute Hudson, Superintendent
Kemper County School District



Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

March 30, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of the Lauderdale County School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in full support of Entegri's position statement in this docket. The positions advocated by Entegri will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like the Lauderdale County School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,



Dr. John-Mark Cain

John-Mark Cain, Ph.D., Superintendent of Education
301 46th CT, Meridian, Mississippi 39305 - (601) 693-1683 – www.lauderdale.k12.ms.us



Okolona Municipal Separate School District
Chad Spence • Superintendent of Education

411 West Main Street, Okolona, MS 38860
Phone: 662.447-.2353
Email: cspence@okolona.k12.ms.us

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

March 30, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of Okolona Municipal School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in full support of Entegry's position statement in this docket. The positions advocated by Entegry will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like Okolona Municipal School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,

Chad Spence,

UNION

PUBLIC SCHOOL DISTRICT

• Cultivating life-long learners who will compete in an ever-changing global society •

Dr. Tyler Hansford, Superintendent

March 31, 2021

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39225-1174

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of Union Public School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I can't use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

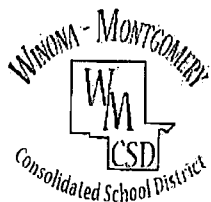
I write this letter in full support of Entegry's position statement in this docket. The positions advocated by Entegry will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like Union to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead

Respectfully submitted,
Tyler C. Hansford
Tyler C. Hansford, Ed.D.

Dr. Tyler Hansford, Superintendent
P.O. Box 445 • 417 S. Decatur St. • Union, MS 39365 • Phone: 601-774-9579 • Fax: 601-774-0600

WINONA-MONTGOMERY CONSOLIDATED SCHOOL DISTRICT

Dr. Teresa Jackson, Superintendent



218 Fairground Street
Winona, MS 38967
662.283.3731

www.winonamontgomerycsd.com

March 31, 2021

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 3925-1174

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules; Docket No. 2021-AD-19

Dear Ms Collier:

On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state.

Much like the Public Service Commission, I am charged with looking out for the Public Interest of Mississippi. As the Superintendent of Winona-Montgomery Consolidated School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to me and all educators in the state for two reasons. First, electricity spending is a significant portion of my Operating Expenses. Every dollar that I must put towards this line item is another dollar I cannot use to pay my teachers and increase opportunity for our students.

Secondly, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

Please accept this letter as my full support of Entegriy's position statement in this docket. The positions advocated by Entegriy will bring economic, environmental, and educational benefits to the school district and the entire state. Allowing schools like Winona-Montgomery Consolidated School District to benefit from solar energy is in the Public Interest of the entire state now and for the decades ahead.

Sincerely,

A handwritten signature in black ink that reads 'Dr. Teresa Jackson'.

Teresa Jackson
Superintendent

TJ/jc

WMCS D

Working together, Moving forward, Creating opportunities for Student success and Dynamic futures



YAZOO COUNTY SCHOOL DISTRICT

"Creating Next Generation Leaders"

OFFICE OF THE SUPERINTENDENT

94 Panther Drive
Yazoo City, Mississippi 39194
Phone: 662.746.4672
Fax: 662.746.9270
www.yazoo.k12.ms.us

Dr. Ken Barron, Superintendent
Dr. Terri Rhea, Assistant Superintendent

Katherine Collier
Executive Secretary
Mississippi Public Service Commission
P.O. Box 1174
Jackson, MS 39725-1174

March 30, 2021

RE: Order Establishing Docket to Review the Efficacy and Fairness of the Net Metering and Interconnection Rules;
Docket No. 2021-AD-19

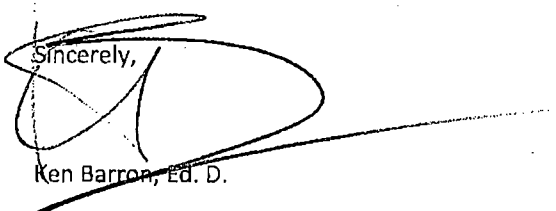
On January 12, 2021, the Mississippi Public Service Commission issued an order establishing a docket to investigate issues surrounding net metering policy in the state. In many ways like the Public Service Commission, I am charged with caring for the public interest of citizens of the State of Mississippi. As the Superintendent of the Yazoo County School District, it is my job to oversee the care and development of the next generation.

This docket is of great importance to educators in the state for two reasons. First, electricity spending is a significant portion of my operating expenses. All funds that are expensed for our utility consumption are funds that we cannot use for instruction. I take the expenditure of funds very seriously and attempt to provide the needs of the students, faculty and community with the greatest degree of efficiency possible.

Second, careers in the energy sector are expected to be the fastest growing occupation in the coming years. I owe it to my students to give them early access to solar energy and the workforce development opportunities that will come with these new technologies.

I write this letter in support of Entegry's position statement in this docket. The positions advocated by Entegry will bring economic, environmental, and educational benefits to the school district and state. Allowing schools like Yazoo County School District to benefit from solar energy is in the public interest of the stakeholders of the district as well as the state into the future.

Sincerely,


Ken Barron, Ed. D.

Superintendent Yazoo County School District

TITLE 39: UTILITIES

PART IV: Mississippi Distributed Generator Interconnection and Net Metering

Subpart I: Mississippi Distributed Generator Interconnection Rule

Chapter 01: Introduction

The Mississippi Distributed Generation Interconnection Rule (MDGIR) sets forth standards to establish the technical and procedural requirements for Distributed Generator Facilities (DGFs) to be interconnected and operated in Parallel with the Electric Distribution System (EDS) owned or operated by Electric Utilities (EUs) in Mississippi under the jurisdiction of the Mississippi Public Service Commission (Commission). Capitalized terms used in this rule have the meaning specified in the section titled DEFINITIONS.

Chapter 02: Definitions

When used in this chapter, the following terms and phrases shall have the following meaning:

- 100 “Adverse System Impact”** means a negative effect, due to technical or operational limits on conductors or equipment being exceeded, that compromises the safety and reliability of the EDS.
- 101 “Applicable Laws and Regulations”** means all duly promulgated and applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.
- 102 “Certificate of Completion”** means a certificate in a completed form approved by the Commission containing information about the Interconnection Equipment to be used, its installation and local inspections.
- 103 “Certified Interconnection Equipment” or “Certified Equipment” or “Certified”** means a designation that the Interconnection Equipment meets the following requirements:
 - 1. The Interconnection Equipment has been tested by a Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration (OSHA) in accordance with the following relevant codes and standards:
 - a. IEEE 1547.1 Standard for Conformance Tests Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems; and
 - b. Underwriters Laboratories (“UL”), UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems;

2. The Interconnection Equipment shall meet the requirements of the most current approved version of each code and standard listed above, as amended and supplemented at the time the Interconnection Request is submitted to be deemed Certified;
3. The Interconnection Equipment has been labeled and is publicly listed by such NRTL at the time of the interconnection application;
4. The Interconnection Customer verifies that the intended use of the Interconnection Equipment falls within the use or uses for which the Interconnection Equipment is labeled and is listed by the NRTL;
5. If the Interconnection Equipment is an integrated equipment package such as an inverter, then the Interconnection Customer shall show that the generator or other electric source being utilized is compatible with the Interconnection Equipment and is consistent with the testing and listing specified for this type of Interconnection Equipment;
6. If the Interconnection Equipment includes only interface components (switchgear, multi-function relays, or other interface devices), an Interconnection Customer shall demonstrate that the generator or other electric source being utilized is compatible with the Interconnection Equipment and is consistent with the testing and listing specified for this type of Interconnection Equipment; and
7. Certified Interconnection Equipment shall not require further design testing or Production Testing, as specified by IEEE Standard 1547 Sections 5.1 and 5.2, or additional Interconnection Equipment modification to meet the requirements. However, nothing herein shall preclude the need for an on-site Witness Test or operational test by the Interconnection Customer.

104 “Commission” means the Mississippi Public Service Commission.

105 “Commissioning Tests” means the tests applied to a DGF by an Interconnection Customer after construction is completed to verify that the DGF does not create Adverse System Impacts. At a minimum, the scope of the Commissioning Tests performed shall include the commissioning test specified by IEEE Standard 1547 section 5.4 “Commissioning Tests.”

106 “Distributed Generator Facility” or “DGF” means the equipment used by an Interconnection Customer to generate or store electricity that operates in Parallel with the EDS. A DGF typically includes an electric generator, prime mover, and the Interconnection Equipment required to safely interconnect with the EDS or local electric power system.

107 “Distribution System Upgrade” means a required addition or modification to the EU's EDS at or beyond the Point of Common Coupling (PCC) to accommodate the interconnection of a DGF. Distribution System Upgrades do not include Interconnection Facilities.

108 “Electric Utility” or “EU” means an electric public utility that is given a local monopoly of service in a defined geographic territory in exchange for the obligation to distributes electricity to all customers within its service territory, and thus is subject to the jurisdiction of the Commission pursuant to the provisions of Mississippi Code Annotated §§ 77-3-1, et seq. A third-party owner of a DGF that is not otherwise an EU is not an EU under the Commission’s rules if the third-party only distributes electricity from a DGF that uses renewable resources to or on behalf of:

a. a single customer per DGF pursuant to a Renewable Energy Net-Metering Services Agreement under the Commission’s Net-Metering Rule; or;

a.b. customers who elect to participate in a Shared Renewable Energy System in accordance with the Commission’s rules.

~~108~~**109 “Electric Distribution System” or “EDS”** means the facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries from interchanges with higher voltage transmission networks that transport bulk power over longer distances. The voltage levels at which EDSs operate differ among areas but generally carry less than 69 kilovolts of electricity. EDS has the same meaning as the term Area EPS, as defined in 3.1.6.1 of IEEE Standard 1547.

~~109~~**110 “Facilities Study”** means an engineering study conducted by the EU to determine the required modifications to the EU’s EDS, including the cost and the time required to build and install such modifications as necessary to accommodate an Interconnection Request.

~~110~~**111 “Fault Current”** means the electrical current that flows through a circuit during an electrical fault condition. A fault condition occurs when one or more electrical conductors contact ground or each other. Types of faults include phase to ground, double-phase to ground, three-phase to ground, phase-to-phase, and three-phase.

~~111~~**112 “Feasibility Study”** means a study performed to identify the existence of obvious adverse impacts before additional studies are undertaken for the proposed project to continue in the process.

~~112~~**113 “Governmental Authority”** mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, EU or any affiliate thereof.

- 114 “Hosting Capacity”** means the amount of generation that can be accommodated at a point on the distribution system without requiring significant Distribution System Upgrades.
- 115 “Hosting Capacity Map”** means a graphical and tabular representation of a high-level estimate of the available hosting capacity for additional distributed generation.
- ~~113~~**116 “IEEE Standard 1547”** means the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Standard 1547 (2003) "Standard for Interconnecting Distributed Resources with Electric Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.
- ~~114~~**117 “IEEE Standard 1547.1”** means the IEEE Standard 1547.1 (2005) "Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.
- ~~115~~**118 “Interconnection Agreement” or “Agreement”** means a form of interconnection agreement approved by the Commission which is applicable to Interconnection Requests pertaining to DGFs. The agreement between the Interconnection Customer and the EU governs the connection of the DGF to the EU’s EDS, as well as the ongoing operation of the DGF after it is connected to the EU’s EDS.
- ~~116~~**119 “Interconnection Application” or “Application”** means a form of interconnection application approved by the Commission which is applicable to Interconnection Requests pertaining to DGFs. This application provides the information needed by the EU to review the request for interconnection. For the Level 1 review process, the Application and Agreement are part of the same document.
- ~~117~~**120 “Interconnection Customer”** means an entity that submits an Interconnection Request for a DGF to an EU's EDS.
- ~~118~~**121 “Interconnection Equipment”** means a group of equipment, components, or an integrated system connecting an electric generator with a local electric power system or an EDS that includes all interface equipment including switchgear, protective devices, inverters or other interface devices. Interconnection equipment may be installed as part of an integrated equipment package that includes a generator or other electric source.
- ~~119~~**122 “Interconnection Facilities”** means facilities and equipment required by the EU to accommodate the interconnection of a DGF. Collectively, Interconnection Facilities include all facilities and equipment between the DGF and the PCC, including modification, additions, or upgrades that are necessary to physically and electrically interconnect the DGF to the EDS. Interconnection facilities are sole use facilities and do not include Distribution System Upgrades.

- ~~120~~**123** **“Interconnection Request”** means an Interconnection Customer's request, in the form of an Application approved by the Commission, requesting the interconnection of a new DGF, or to increase the capacity or modify operating characteristics of an existing approved DGF that is interconnected with the EU's EDS.
- ~~121~~**124** **“Line Section”** means that portion of an EU's distribution system connected to an Interconnection Customer, bounded by automatic sectionalizing devices or the end of the distribution line.
- ~~122~~**125** **“Local Electric Power System” or “Local EPS”** means facilities that deliver electric power to a load that are contained entirely within a single premises or group of premises. Local electric power system has the same meaning as the term local electric power system defined in 3.1.6.2 of IEEE Standard 1547.
- ~~123~~**126** **“Minor Equipment Modification”** means changes to the DGF that do not have a material impact on safety or reliability of the EDS.
- ~~124~~**127** **“Mississippi Distributed Generation Interconnection Rule (MDGIR)”** means the most current version of the procedures for interconnecting Distributed Generator Facilities adopted by the Mississippi Public Service Commission.
- ~~125~~**128** **“Nameplate Capacity”** means the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer and is usually indicated on a nameplate physically attached to the power production equipment.
- ~~126~~**129** **“Nationally Recognized Testing Laboratory” or “NRTL”** means a qualified private organization that meets the requirements of the Occupational Safety and Health Administration's (OSHA) regulations. NRTLs perform independent safety testing and product certification. Each NRTL shall meet the requirements as set forth by OSHA in the NRTL program.
- ~~127~~**130** **“Parallel Operation” or “Parallel”** means the sustained state of operation over 100 milliseconds, which occurs when a DGF is connected electrically to the EDS and thus has the ability for electricity to flow from the DGF to the EDS.
- ~~128~~**131** **“Point of Common Coupling” or “PCC”** means the point where the DGF is electrically connected to the EDS. Point of common coupling has the same meaning as defined in 3.1.13 of IEEE Standard 1547.
- ~~129~~**132** **“Primary Line”** means a distribution line rated at greater than 600 volts.
- ~~130~~**133** **“Production Test”** means production test as defined in IEEE Standard 1547.

- ~~131~~**134** **“Queue Position”** means the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the EU.
- ~~132~~**135** **“Radial Distribution Circuit”** means a circuit configuration where independent feeders branch out radially from a common source of supply. From the standpoint of a utility system, the area described is between the generating source or intervening substations and the customer’s entrance equipment. A radial distribution system is the most common type of connection between a utility and load in which power flows in one direction from the utility to the load.
- ~~133~~**136** **“Scoping Meeting”** means a meeting between representatives of the Interconnection Customer and EU conducted for the purpose of discussing alternative interconnection options, exchanging information including any EDS data and earlier study evaluations that would be reasonably expected to impact interconnection options, analyzing information, and determining the potential feasible points of interconnection.
- ~~134~~**137** **“Secondary Line”** means a service line subsequent to the Primary Line that is rated for 600 volts or less, also referred to as the customer’s service line.
- ~~135~~**138** **“System Impact Study”** means a study that identifies the electric system impacts that would result if the proposed DGF were interconnected without DGF modifications or EDS modifications, focusing on the Adverse System Impacts identified in the Feasibility Study.
- ~~136~~**139** **“UL Standard 1741”** means Underwriters Laboratories' standard titled "Inverters Converters, and Controllers for Use in Independent Power Systems,” as amended and supplemented at the time the Interconnection Request is submitted.
- ~~137~~**140** **“Witness Test”** means verification (through on-site observation) by the EU that the installation evaluation required by IEEE Standard 1547 Section 5.3 and the Commissioning Test required by IEEE Standard 1547 Section 5.4, have been adequately performed. For Interconnection Equipment that has not been Certified, the Witness Test shall also include the verification by the EU of the on-site design tests as required by IEEE Standard 1547 Section 5.1 and verification by the EU of Production Tests required by IEEE Standard 1547 Section 5.2. All tests verified by the EU are to be performed in accordance with the applicable test procedures specified by IEEE Standard 1547.1.

Chapter 03: INTERCONNECTION REQUESTS, FEES, AND FORMS

- 100** To facilitate the efficiency of Interconnection Requests, each EU shall publish Hosting Capacity Maps on its website that demonstrate the Hosting Capacity for accommodating generation at every feeder on the distribution system without requiring mitigations such as significant Distribution System Upgrades.

~~100~~**101** Interconnection Customers seeking to interconnect a DGF shall submit an Interconnection Request to the EU that owns the EDS to which interconnection is sought, using an application approved by the Commission. Electronic versions of such Commission-proved Application forms shall be posted on the EU's website. The EU shall establish processes for accepting Interconnection Requests electronically and for posting updates and other information relevant to the processing of the Interconnection Request.

~~101~~**102** When an Interconnection Customer is not currently a customer of the EU at the proposed PCC, upon request from the EU, the Interconnection Customer shall provide proof of site control evidenced by a property tax bill, deed, lease agreement, or other legally binding contract.

~~102~~**103** Interconnection fees shall be governed as follows for all Interconnection Requests and shall be published on each EU's website:

1. An EU may not charge an application, or other fee, to an applicant that requests Level 1 interconnection review. However, if an application for Level 1 interconnection review is denied because it does not meet the requirements for Level 1 interconnection review and the applicant resubmits the application under another review procedure in accordance with the MDGIR, the EU may impose a fee for the resubmitted application, consistent with this section.
2. For a Level 2 interconnection review, the EU may charge fees of up to \$50.00 plus \$1.00 per kilowatt of the customer-generator facility's capacity, plus the reasonable cost of any required minor modifications to the electric distribution system or additional review. Costs for such minor modifications or additional review will be based on the EU's non-binding, good faith estimates and the ultimate actual installed costs. Costs for engineering work done as part of any additional review will not exceed \$100.00 per hour.
3. For a Level 3 interconnection review, the EU may charge fees of up to \$100.00 plus \$2.00 per kilowatt of the customer-generator facility's capacity, as well as charges for actual time spent on any required impact or facilities studies. Costs for engineering work done as part of an impact study or interconnection facilities study will not exceed \$100.00 per hour. If the EU must install facilities in order to accommodate the interconnection of the customer generating facility, the cost of such facilities will be the responsibility of the applicant.

~~103~~**104** When the EU determines that an Interconnection Request is complete, a modification of DGF design by the Interconnection Customer other than a Minor Equipment Modification that is not agreed to in writing by the EU shall require submission of a new Interconnection Request.

Chapter 04: INTERCONNECTION REVIEW LEVELS

- 100 The EU shall review Interconnection Requests using one of the three levels of review procedures established below. The EU shall first use the level of DGF Agreement specified by the Interconnection Customer in the Application. The EU may not impose additional requirements not specifically authorized unless the EU and the Interconnection Customer mutually agree to do so in writing.
- 101 When an Interconnection Request is for an increase in capacity for an existing DGF, the Interconnection Request shall be evaluated on the basis of the new total Nameplate Capacity of the DGF.
- 102 When an Interconnection Request is for a DGF that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single PCC, the Interconnection Request shall be evaluated on the basis of the aggregate Nameplate Capacity of the multiple devices.

Chapter 05: LEVEL 1 INTERCONNECTION REVIEWS

- 100 The EU shall use Level 1 review procedures to evaluate Interconnection Requests when:
 1. The DGF is inverter-based;
 2. The DGF has a Nameplate Capacity of 250 kW or less; and
 3. The Interconnection Equipment proposed for the DGF is Certified.
- 101 For Level 1 Interconnection Review, the EU shall first evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:
 1. For interconnection of a proposed DGF to a Line Section on a Radial Distribution Circuit, the aggregated generation on the Line Section, including the proposed DGF, shall not exceed 15% of the Line Section annual peak load.
 2. When a proposed DGF is to be interconnected to a single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed DGF, may not exceed 250 kW.
 3. When a proposed DGF is single-phase and is to be interconnected to a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
 4. Construction of facilities by the EU on its own system is not required to accommodate the DGF.

- 102** The Level 1 Interconnection Review shall then be conducted in accordance with the following procedures:
1. An EU shall, within 10 business days after receipt of the Interconnection Request, inform the Interconnection Customer in writing or by electronic mail that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing.
 2. When an Interconnection Request is complete, the EU shall assign a Queue Position.
 3. The EU shall, within 15 business days after notifying a Level 1 applicant that the application is complete, indicate that the DGF equipment meets all Level 1 criteria, verify the DG can be interconnected safely and reliably using Level 1 screens, and provide a conditionally approved Level 1 Interconnection Application Form and Agreement to the Interconnection Customer.
- 103** Unless the EU determines and demonstrates to the Interconnection Customer that a DGF cannot be interconnected safely or reliably to its system and provides a letter to the Interconnection Customer explaining its reasons for denying an Interconnection Request, the EU's final approval of the Interconnection Agreement is subject to the following conditions:
1. 'The DGF has been approved by local or municipal electric code officials with jurisdiction over the interconnection;
 2. The EU has received the required information on the Certificate of Completion from the Interconnection Customer. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
 3. The EU has completed its Witness Test in accordance with the MDGIR.
- 104** Within 10 business days of the estimated commissioning date indicated on the Interconnection Request, the EU shall, upon reasonable notice and at a mutually convenient time, conduct a Witness Test of the DGF to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes.
- 105** When a DGF is not approved under a Level 1 review, the Interconnection Customer may submit a new Interconnection Request for consideration under Level 2 or Level 3 procedures.

Chapter 06: LEVEL 2 INTERCONNECTION REVIEWS

- 100** The EU shall use the Level 2 Interconnection Review procedure to evaluate an Interconnection Request when:

1. The DGF has a Nameplate Capacity rating of 52 MW or less;
2. The Interconnection Equipment proposed for the DGF is Certified; and
3. The aggregated total of the Nameplate Capacity of all of the generators on the circuit, including the proposed DGF, is 52 MW or less.

101 No construction of facilities by an EU shall be required to accommodate the DGF, except as permitted by an additional review for minimal modifications of the EDS, as described in these Level 2 procedures.

102 For Level 2 Interconnection Review, the EU first shall evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:

1. For interconnection of a proposed DGF to a radial distribution circuit, the aggregated generation on the Line Section, including the proposed DGF, may not exceed 15% of the Line Section annual peak load.
2. The proposed DGF, in aggregation with other generation on the distribution circuit, may not contribute more than 10% to the distribution circuit's maximum Fault Current at the point on the Primary Line nearest the Point of Common Coupling (PCC).
3. The proposed DGF, in aggregate with other generation on the distribution circuit, may not cause any distribution protective devices and equipment (including substation breakers, fuse cutouts, and line reclosers), or other customer equipment on the EDS to be exposed to Fault Currents exceeding 87.5% of the short circuit interrupting capability. The Interconnection Request may not receive approval for interconnection on a circuit that already exceeds 87.5% of the short circuit interrupting capability.
4. When a DGF is to be connected to three-phase, three-wire primary EU distribution lines, a three-phase or single-phase generator shall be connected phase-to-phase.
5. When a DGF is to be connected to three-phase, four-wire primary EU distribution lines, a three-phase or single-phase generator shall be connected line-to-neutral and shall be effectively grounded.
6. When the proposed DGF is to be interconnected on a single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed DGF, shall not exceed 250 kW.
7. When a proposed DGF is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition may not create an imbalance between the

two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.

8. A DGF, in aggregate with other generation interconnected to the distribution side of a substation transformer feeding the circuit where the DGF proposes to interconnect, may not exceed 10 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity.
9. No construction of facilities by an EU on its own system shall be required to accommodate the DGF.

103 The Level 2 Interconnection Review shall then be conducted in accordance with the following procedures:

1. An EU shall, within 10 business days after receipt of the Interconnection Request, inform the Interconnection Customer in writing or by electronic mail that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing. As part of this process, the EU shall assign a Queue Position. The Queue Position of the Interconnection Request shall be used to determine the potential Adverse System Impact of the DGF based on the relevant screening criteria. If there are higher queued Interconnection Requests on the same radial line circuit, the EU shall evaluate the Interconnection Requests by performing any Level 2 screens requiring aggregate capacity calculations and determine if the DGF in combination with the higher queued Interconnection Requests exceeds any of the aggregate capacity requirements. If an aggregate capacity requirement is exceeded, the EU shall notify the Interconnection Customer and shall not be obligated to meet the timeline for reviewing the Interconnection Request until such time as the EU has completed the review of all other Interconnection Requests that have a higher Queue Position and impact the aggregate capacity calculation that has been exceeded.
2. At the time an EU determines additional information is required to complete an evaluation, the EU shall request the information. The time necessary to complete the evaluation may be extended by mutual agreement of the parties, but only to the extent of the time required for receipt of the additional information. During an extension of time to submit additional information, the EU may not alter the Interconnection Customer's Queue Position.
3. Within 20 business days after the EU notifies the Interconnection Customer that it has received a completed Interconnection Request, the EU shall:
 - a. Evaluate the Interconnection Request using the Level 2 screening criteria;

- b. Review any analysis provided by the Interconnection Customer, using the same criteria used by the customer; and
 - c. Provide the Interconnection Customer with the EU's evaluation, including a comparison of the results of its own analyses with those of Interconnection Customer, if applicable. When an EU does not have a record of receipt of the Interconnection Request and the Interconnection Customer can demonstrate that the original Interconnection Request was delivered, the EU shall expedite its review to complete the evaluation of the Interconnection Request within 20 business days of the Interconnection Customer's re-submittal.
- 104 The EU shall provide the Interconnection Customer a DGF Interconnection Agreement within 5 business days of its determination that the Interconnection Request passes the Level 2 screening criteria.
- 105 When a DGF has failed to meet one or more of the Level 2 screens, the EU shall offer to perform additional review for minimal modifications of the EDS to determine whether minimal modifications to the EDS would enable the interconnection to be made consistent with safety, reliability and power quality criteria. The EU shall provide the Interconnection Customer with a nonbinding, good faith estimate of the costs of additional review for minimal modifications of the EDS. The EU shall undertake the additional review for minimal modifications of the EDS or the modifications only after the Interconnection Customer consents to pay for the review and modifications.
- 106 If the DGF fails one or more of the Level 2 screening criteria but the EU determines that minimal modifications to the EDS would enable the DGF to interconnect safely and reliably, the EU shall provide the Interconnection Customer a DGF Interconnection Agreement within 5 business days of making that determination.
- 107 If the EU finds that the DGF cannot be interconnected with minimal modifications to the EDS, the EU shall provide the Interconnection Customer a letter explaining its reasons for denying the Interconnection Request. The Interconnection Customer may submit a new Interconnection Request for consideration under a Level 3 interconnection review.
- 108 An Interconnection Customer shall have 30 business days to sign and return the Agreement. When an Interconnection Customer does not sign the DGF Interconnection Agreement within 30 business days, the Interconnection Request shall be deemed withdrawn unless the Interconnection Customer requests in writing prior to the expiration of the 30 business day period to extend the deadline. The EU may not unreasonably deny the request for extension.
- 109 The DGF Interconnection Agreement shall not become final until:
- 1. The milestones agreed to in the DGF Interconnection Agreement are satisfied;

2. The DGF is approved by electric code officials with jurisdiction over the interconnection;
 3. The Interconnection Customer provides a Certificate of Completion to the EU. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
 4. The Witness Test was successfully completed per the terms and conditions found in the Agreement.
- 110 If the DGF is not approved under a Level 2 review, the EU shall provide the Interconnection Customer a letter explaining its reasons for denying the Interconnection Request. The Interconnection Customer may submit a new Interconnection Request for consideration under a Level 3 interconnection review. The Queue Position assigned to the Level 2 Interconnection Request shall be retained provided the request is made within 15 business days of notification that the current Interconnection Request is denied.

Chapter 07: LEVEL 3 INTERCONNECTION REVIEWS

- 100 The EU shall use the Level 3 review procedure to evaluate an Interconnection Request when the Interconnection Customer requests Level 3 review.
- 101 The Level 3 review shall be conducted in accordance with the following process:
1. An EU shall, within 10 business days of receipt of an Interconnection Request, inform the Interconnection Customer in writing or by electronic means that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing.
 2. When the Interconnection Request is deemed not complete, the EU shall provide the Interconnection Customer with a written list detailing information required to complete the Interconnection Request. The Interconnection Customer shall have 10 business days to provide appropriate data in order to complete the Interconnection Request, or the Interconnection Request shall be considered withdrawn. The parties may agree to extend the time for receipt of the additional information. The Interconnection Request shall be deemed complete when the required information has been provided by the Interconnection Customer, or the parties have agreed that the Interconnection Customer may provide additional information at a later time.
 3. When an Interconnection Request is complete, the EU shall assign a Queue Position. The Queue Position of an Interconnection Request shall be used to determine the cost responsibility necessary for the facilities to accommodate the interconnection. The EU shall notify the Interconnection Customer about other

higher-queued Interconnection Customers that have the potential to impact the cost responsibility.

4. Level 3 Scoping Meetings shall be conducted as follows:
 - a. By mutual agreement of the parties, the Scoping Meeting, interconnection Feasibility Study, interconnection System Impact Study, or interconnection Facilities Study provided for in a Level 3 review may be waived;
 - b. If agreed to by the parties, a Scoping Meeting shall be held within 10 business days, or other mutually agreed to time, after the EU has notified the Interconnection Customer that the Interconnection Request is deemed complete.⁵ The purpose of the meeting shall be to review the Interconnection Request, existing studies relevant to the Interconnection Request, and the results of the Level 1 or Level 2 screening criteria;
 - c. When the parties agree at a Scoping Meeting that an interconnection Feasibility Study shall be performed, the EU shall provide to the Interconnection Customer, no later than 5 business days after the Scoping Meeting, an interconnection Feasibility Study agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study;
 - d. When the parties agree at a Scoping Meeting that an interconnection Feasibility Study is not required, the EU shall provide to the Interconnection Customer, no later than 5 business days after the Scoping Meeting, an interconnection System Impact Study agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study; and
 - e. When the parties agree at the Scoping Meeting that an interconnection Feasibility Study and System Impact Study are not required, the EU shall provide to the Interconnection Customer, no later than 5 business days after the Scoping Meeting, an interconnection Facilities Study agreement including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.
5. Any required interconnection studies shall be carried out using the following guidelines:
 - a. An interconnection Feasibility Study shall include the following analyses and conditions for the purpose of identifying and addressing potential Adverse System Impacts to the EU's EDS that would result from the interconnection:

- b. Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 - c. Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
 - d. Initial review of grounding requirements and system protection;
 - e. Description and nonbinding estimated cost of facilities required to interconnect the DGF to the EU's EDS in a safe and reliable manner; and
 - f. Additional evaluations at the expense of the Interconnection Customer, when an Interconnection Customer requests that the interconnection Feasibility Study evaluate multiple potential points of interconnection.
6. An interconnection System Impact Study shall evaluate the impact of the proposed interconnection on both the safety and reliability of the EU's EDS. The study shall identify and detail the system impacts that result when the proposed DGF is interconnected without project or system modifications, focusing on the Adverse System Impacts identified in the interconnection Feasibility Study and potential impacts including those identified in the Scoping Meeting. The study shall consider all generating facilities that, on the date the interconnection System Impact Study is commenced, are directly interconnected with the EU's system, have a pending higher Queue Position to interconnect to the system, and have a signed a DGF Interconnection Agreement.
- a. An interconnection System Impact Study shall be performed when the interconnection Feasibility Study identifies a potential distribution system Adverse System Impact. The EU shall send the Interconnection Customer an interconnection System Impact Study agreement within 5 business days of transmittal of the interconnection Feasibility Study report. The agreement shall include an outline of the scope of the study and a good faith estimate of the cost to perform the study. The System Impact Study shall include:
 - i. A load flow study;
 - ii. Identification of affected systems;
 - iii. An analysis of equipment interrupting ratings;
 - iv. A protection coordination study;
 - v. Voltage drop and flicker studies;
 - vi. Protection and set point coordination studies;
 - vii. Grounding reviews; and
 - viii. Impact on system operation.
 - b. An interconnection System Impact Study shall consider the following criteria:

- i. A short circuit analysis;
 - ii. A stability analysis;
 - iii. Alternatives for mitigating Adverse System Impacts on affected systems;
 - iv. Voltage drop and flicker studies;
 - v. Protection and set point coordination studies; and
 - vi. Grounding reviews.
 - c. The interconnection System Impact Study shall provide the following:
 - i. The underlying assumptions of the study;
 - ii. The results of the analyses;
 - iii. A list of any potential impediments to providing the requested interconnection service;
 - iv. Required Distribution System Upgrades; and
 - v. A nonbinding good faith estimate of cost and time to construct any required Distribution System Upgrades.
 - d. The parties shall use an interconnection System Impact Study agreement approved by the Commission.
7. The interconnection Facilities Study shall be conducted as follows:
- a. Within 5 business days of completion of the interconnection System Impact Study, the EU shall —send a report to the Interconnection Customer with an interconnection Facilities Study agreement, which includes an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study;
 - b. The interconnection Facilities Study shall estimate the cost of the equipment, engineering, procurement and construction work including overheads needed to implement the conclusions of the interconnection Feasibility Study and the interconnection System Impact Study to interconnect the DGF. The interconnection Facilities Study shall identify:
 - i. The electrical switching configuration of the equipment, including transformer, switchgear, meters and other station equipment;
 - ii. The nature and estimated cost of the EU's Interconnection Facilities and Distribution System Upgrades necessary to accomplish the interconnection; and
 - iii. An estimate of the time required to complete the construction and installation of the facilities;

- c. The parties may agree to permit an Interconnection Customer to separately arrange for a third party to design and construct the required Interconnection Facilities. The EU may review the design of the facilities under the interconnection Facilities Study agreement. When the parties agree to separately arrange for design and construction and to comply with security and confidentiality requirements, the EU shall make all relevant information and required specifications available to the Interconnection Customer to permit the Interconnection Customer to obtain an independent design and cost estimate for the facilities, which shall be built in accordance with the specifications;
 - d. Upon completion of the interconnection Facilities Study, and with the agreement of the Interconnection Customer to pay for the Interconnection Facilities and Distribution System Upgrades identified in the interconnection Facilities Study, the EU shall provide the Interconnection Customer with a DGF Interconnection Agreement within 5 business days; and
- 8. When an EU determines, as a result of the interconnection studies conducted under a Level 3 review, that it is appropriate to interconnect the DGF, the EU shall provide the Interconnection Customer with a DGF Interconnection Agreement. If the Interconnection Request is denied, the EU shall provide a written explanation setting forth the reasons for denial;
- 9. An Interconnection Customer shall have 30 business days from receipt of the DGF Interconnection Agreement, unless another mutually agreeable time frame is reached, to sign and return the DGF Interconnection Agreement to the EU. If an Interconnection Customer does not sign the DGF Interconnection Agreement within 30 business days, the Interconnection Request shall be deemed withdrawn unless the Interconnection Customer requests in writing, prior to the expiration of the 30 business-day period, to extend the deadline. The EU may not unreasonably deny the request for extension. When construction is required, the interconnection of the DGF shall proceed according to milestones agreed to by the parties in the DGF Interconnection Agreement. The DGF Interconnection Agreement may not be final until:
 - a. The milestones agreed to in the DGF Interconnection Agreement are satisfied;
 - b. The DGF is approved by electric code officials with jurisdiction over the interconnection;
 - c. The Interconnection Customer provides a Certificate of Completion to the EU. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and

- d. The Witness Test was successfully completed per the terms and conditions found in the Agreement.
- 102 An interconnection System Impact Study is not required when the interconnection Feasibility Study concludes there is no Adverse System Impact, or when the study identifies an Adverse System Impact, but the EU is able to identify a remedy without the need for an interconnection System Impact Study.
- 103 The parties shall use a form of interconnection Feasibility Study agreement approved by the Commission.

Chapter 08: TECHNICAL STANDARDS

- 100 The technical standard to be used in evaluating all Interconnection Requests under Level 1, Level 2, and Level 3 reviews, unless otherwise provided for in these procedures, is IEEE Standard 1547. IEEE 1547.2, "Application Guide for IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems," shall be used as a guide (but not a requirement) to detail and illustrate the interconnection protection requirements that are provided in IEEE 1547.

Chapter 09: POINT OF COMMON COUPLING

- 100 To minimize the cost of interconnecting multiple DGFs, the EU or the Interconnection Customer may propose a single PCC for multiple DGFs located at a single site. If the Interconnection Customer rejects the EU's proposal for a single PCC, the Interconnection Customer shall pay the additional cost, if any, of providing a separate PCC for each DGF. If the EU rejects the customer's proposal for a single PCC without providing a written technical explanation, the EU shall pay the additional cost, if any, of providing a separate PCC for each DGF.

Chapter 10: RECORDS AND REPORTS

- 100 An EU shall maintain records of the following for a minimum of 3 years:
 1. The total number of and the Nameplate Capacity of the Interconnection Requests received, approved and denied under Level 1, Level 2, and Level 3 reviews;
 2. The number of Interconnection Requests that were not processed within the timelines established in this rule;
 3. The number of Scoping Meetings held and the number of feasibility studies, impact studies, and facility studies performed and the fees charged for these studies;
 4. The justifications for the actions taken to deny Interconnection Requests; and

- 101 An EU shall provide a report to the Commission containing the information required in paragraphs (a)-(d) above within 90 calendar days of the close of each year.

Chapter 11: INFORMATION FOR PROSPECTIVE INTERCONNECTIONCUSTOMERS

- 100 An EU shall designate a contact person and contact information on its website and for the Commission's website for submission of all Interconnection Requests and from whom information on the Interconnection Request process and the EU's EDS can be obtained regarding a proposed DGF. The information shall include studies and other materials useful to an understanding of the feasibility of interconnecting a DGF at a particular point on the EU's EDS, except to the extent that providing the materials would violate security requirements or confidentiality agreements, or otherwise would be contrary to Mississippi or federal law and regulations. In appropriate circumstances, the EU may require execution of a confidentiality agreement prior to release of information about the EU's EDS.
- 101 When the EU determines that an Interconnection Request is complete, a modification of DGF design by the Interconnection Customer other than a Minor Equipment Modification that is not agreed to in writing by the EU shall require submission of a new Interconnection Request.

Chapter 12: ADDITIONAL TECHNICAL REQUIREMENTS

- 100 DGFs shall be capable of being isolated from the EU. For Level 2 and Level 3 interconnection, the isolation shall be by means of a lockable, visible-break isolation device whose status is clearly indicated and is accessible by the EU. The isolation device shall be installed, owned and maintained by the owner of the DGF and located between the DGF and the PCC. A draw-out type circuit breaker with a provision for padlocking at the draw-out position can be considered an isolation device for purposes of this requirement. A draw-out type circuit breaker has a switching device capable of making, carrying and breaking currents under normal and abnormal circuit conditions such as those of a short circuit. A draw-out circuit breaker can be physically removed from its enclosure creating a visible break in the circuit. For the purposes of these regulations, the draw-out circuit breaker shall be capable of being locked in the open, draw-out position. Level 1 interconnections do not require an external isolation device.
- 101 A Level 2 or Level 3 Interconnection Customer may elect to provide the EU access to an isolation device that is contained in a building or area that may be unoccupied and locked or not otherwise readily accessible to the EU, by installing a lockbox provided by the EU that shall provide ready access to the isolation device. The Interconnection Customer shall install the lockbox in a location that is readily accessible by the EU, and the Interconnection Customer shall permit the EU to affix a placard in a location of its

choosing that provides clear instructions to EU operating personnel on access to the isolation device. In the event that the Interconnection Customer fails to comply with the terms of this subsection and the EU needs to gain access to the isolation device, the EU shall not be held liable for any damages resulting from any necessary EU action to isolate the Interconnection Customer.

- 102 Any metering necessitated by a DGF shall be installed, operated and maintained in accordance with applicable tariffs. Any such metering requirements shall be clearly identified as part of the DGF Interconnection Agreement executed by the Interconnection Customer and the EU.
- 103 The EU shall design, procure, construct, install, and own any Distribution System Upgrades. The actual cost of the Distribution System Upgrades, including overheads, shall be directly assigned to the Interconnection Customer. The Interconnection Customer may be entitled to financial contribution from any other EU customers who may in the future utilize the upgrades paid for by the Interconnection Customer. Such contributions shall be governed by the rules, regulations, and decisions of the Commission.
- 104 The Interconnection Customer shall design its DGF to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the power factor range required by the EU's applicable tariff for a comparable load customer. EU may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 3 of the "Mississippi Distributed Generator Interconnection Rule Level 2 and Level 3 Agreement for Interconnection of Distributed Generator Facilities." Under no circumstance shall these additional requirements for voltage support or reactive power exceed the normal operating capabilities of the DGF. The requirements in this paragraph may be additional to requirements in IEEE 1547.

Chapter 13: DISPUTES

- 100 A party shall attempt to resolve all disputes regarding interconnection as provided in the MDGIR promptly, equitably, and in a good faith manner.
- 101 When a dispute arises, a party may seek immediate resolution through complaint procedures available through the Commission by providing written notice to the Commission and the other party stating the issues in dispute.
- 102 When disputes relate to the technical application of the MDGIR, the Commission may designate a technical consultant to resolve the dispute. Upon Commission designation, the parties shall use the technical consultant to resolve disputes related to interconnection. Costs for dispute resolution conducted by the technical consultant shall be established by the technical consultant and subject to review by the

Commission. The EU and the Interconnection Customer shall share equally the costs of an outside arbitrator unless they mutually agree to a different payment arrangement.

- 103** Pursuit of dispute resolution shall not affect an Interconnection Customer with regard to consideration of an Interconnection Request or an Interconnection Customer's Queue Position.

TITLE 39: UTILITIES

PART IV: Mississippi Distributed Generator Interconnection and Net Metering

Subpart II: Mississippi Renewable Energy Net Metering Rule

Chapter 01: Introduction

- 100 The Mississippi Renewable Energy Net Metering Rule (MRENMR) sets forth technical and procedural requirements for Net Metering on qualified Distributed Generator Facilities (DGFs). These DGFs are also subject to the requirements of the Mississippi Distributed Generator Interconnection Rule (MDGIR).

Chapter 02: DEFINITIONS

The following capitalized terms, when used in this Rule, shall have the following meanings unless the context clearly indicates otherwise. These definitions are in addition to those found in the MGDIR, which also apply to the MRENMR.

- 100 **“Billing Period”** means the monthly billing period used by an Electric Utility (EU) to measure usage and any excess energy exported by a DGF to the EU, and to bill customers.
- 101 **“Avoided Cost of Wholesale Power”** means the cost to an EU¹ of electric energy that the EU would generate itself or purchase from another source, such as from an organized wholesale power market, but for the purchase from a Renewable Energy Net Metered Interconnection Customer (RENMIC). In essence, the avoided cost is the marginal cost to produce or purchase one more unit of electrical energy. When a RENMIC delivers electricity to an EU, the EU will reduce the equivalent amount of electricity that either is generated at its most expensive operating plant that is not running for reliability purposes or is purchased from an organized wholesale power market. For power generated by an EU, the cost avoided consists of the cost of fuel needed to produce that electricity and the corresponding portion of the plant’s operation and maintenance costs and shall include an appropriate average line loss adjustment. No capacity credit is given as part of the calculation of Avoided Cost of Wholesale Power. For an EU that is a member of a regional transmission organization (RTO), the Avoided Cost of Wholesale Power shall be the average real-time locational marginal price (LMP) calculated by the RTO for the EU’s load zone(s). Such LMP may be adjusted to reflect the daytime energy production of a solar PV system and shall include an appropriate average line loss adjustment.
- ~~100 **“Non-Quantifiable Expected Benefits”** means a temporary adjustment to be included in the Total Benefits of Distributed Generation for benefits of distributed generation that, while expected to occur, are currently non-quantifiable. The Non-Quantifiable~~

¹ An EU is an electric utility within the meaning of Miss. Code Ann. section 77-3-3(d)(i) (Supp 2014).

~~Expected Benefits shall be no more than 2.5 cents per kilowatt hour for no longer than three (3) years after the effective date of this rule, which shall serve as a proxy for the Actual Benefits of Distributed Generation further defined below.~~

- 102 **“Actual Benefits of Distributed Generation”** means actual, quantifiable benefits realized by installed distributed generation over and above the Avoided Cost of Wholesale Power, which shall be calculated based upon information derived from the completion of a benefit-cost assessment (BCA) conducted in accordance with the principles and guidance set forth in the National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources (NSPM for DERs) published by the National Energy Screening Project report of a third-party consultant chosen by the Commission (further described below) and the experience of the utilities since implementation of this rule, as well as any additional information that may be available in the industry at that time. -The calculation of the Actual Benefits of Distributed Generation shall replace the temporary Non-Quantifiable Expected Benefits Classic 1:1 Net-Metering no later than three (3) years following the effective date of this rule Commission’s approval of a BCA framework in accordance with the guidance in the NSPM-~~DER~~-DER.
- 103 **“Low-Income Benefits Adder”** means an additional amount to be included in the Total Benefits of Distributed Generation that shall flow to ~~the first 1,000 qualifying customers~~ whose household income is at or below 200% of the federal poverty level (or similar requirement proposed by the EU to be approved by the Commission) who is approved to take service under the EU’s net metering tariff. -Beginning with the effective date of this rule, the Low-Income Benefits Adder shall be equal to 2 cents per kilowatt hour. To provide sufficient financial certainty to qualifying low income customers that install DGFs, this Low-Income Benefits Adder shall remain in place for a period of fifteen (15) years from the date the customer begins taking net metering service under the EU’s net metering tariff.
- 104 **“Total Benefits of Distributed Generation”** means the total amount – expressed in cents per kilowatt hour - that shall be credited to EU customers as a result of excess energy exported by a DGF to the EU, which shall include the Avoided Cost of Wholesale Power plus ~~the Non-Quantifiable Expected Benefits or the Actual Benefits~~ of Distributed Generation, plus, if applicable, the Low-Income Benefits Adder, as further outlined in this rule.
- 105 **“Exit Fee”** means a fee that is paid by a customer that reduces load by using a DGF and is intended to compensate the EU in whole or part for the loss of fixed cost contribution from that customer. Exit fees are not allowed under this Rule, unless otherwise approved by the Commission.
- ~~106~~ **“Renewable Energy Net Metered Interconnection Customer” or “RENMIC”** is any electricity customer, such as an industrial, large commercial, residential or small commercial customer, that generates electricity on the customer’s side of the meter using a Renewable Energy source. The electricity customer must own or lease the DGF

~~producing the Renewable Energy on the electricity customer's side of the meter, or be the sole entity obtaining electric energy from the DGF pursuant to a contract or service agreement with a third party that is not a public utility~~a Renewable Energy Net-Metering Services Agreement, in order to qualify as a RENMIC under this MRENMR, unless otherwise approved by the Commission. The electricity customer is not required to own the land upon which the DGF is sited in order to qualify as a RENMIC. ~~Third party owners of Renewable Energy Sources shall not be considered public utilities under Miss. Code Ann. 77-3-3(d).~~

106

107 **"Net Metering"** means measuring the real-time kilowatt-hours supplied by the EU to the RENMIC and the kilowatt-hours produced by the RENMIC's DGF and exported to the EU over the applicable Billing Period. Net metering includes the real-time displacement of kilowatt-hours that otherwise would be provided by the EU by kilowatt-hours that were generated by the RENMIC's DGF. An EU may employ a multi-channel meter for separately measuring the RENMIC's electric usage and excess energy exported to the EU.

108 **"Renewable Energy"** means electric energy produced from solar technologies, wind energy, geothermal technologies, wave or tidal action, hydro-power facilities, and biomass. Any energy derived from fossil fuels is not considered renewable and does not qualify under the MRENMR.

~~109~~ **"Biomass"** means a power source that is comprised of combustible solids or gases from forest products, manufacturing waste, or byproducts; products from agricultural and orchard crops; waste or co-products from livestock and poultry operations; waste or byproducts from food processing; urban wood waste; municipal liquid waste treatment operations; and landfill gas.

109

~~110~~ **"Renewable energy credit"** means the environmental, economic, and social attributes of a unit of electrical energy ~~(ity, such as a megawatt hour), generated from renewable fuels that can be sold or traded separately from the electrical energy.~~

110

~~111~~ ~~112~~ **"Classic 1:1 Net-Metering"** means that in each Billing Period, if the energy supplied to the RENMIC from the EU exceeds the energy supplied by the RENMIC to the EU plus any accrued kWh credits from previous Billing Periods, the RENMIC will be billed for the net energy supplied to the RENMIC using appropriate commission-approved rate and rider schedules. In each Billing Period, if the energy supplied to the RENMIC from the EU is less than the energy supplied by the RENMIC to the EU plus any accrued kWh credits from the previous Billing Periods, the RENMIC shall only be billed for the applicable fixed monthly customer charges or minimum bill provisions in

accordance to Chapter 3, 109. At the end of that same Billing Period, any excess energy supplied from the RENMIC to the EU shall be credited on the RENMIC's bill as a kWh credit. KWh credits shall be carried over to the next Billing Period and offset on a one-to-one basis any kWh usage by the RENMIC arising during the subsequent Billing Period. Classic 1:1 Net-Metering shall be used for billing and crediting purposes temporarily until such a time when the BCA analysis for renewable DG is completed and the Commission has established a new compensation rate or rates for Actual Benefits of Distributed Generation based on the BCA analysis.

111

112 "Renewable Energy Net-Metering Services Agreement" means an—services agreement between a single RENMIC and a third-party owner of a DGF that generates renewable energy whereby the DGF generates electricity for Net Metering on behalf of of a single the RENMIC for the purpose of Net-Metering.

Chapter 03: NET METERING REQUIREMENTS

~~101~~100 This MRENMR sets forth the Net Metering requirements that apply to EUs that have RENMICs that wish to Net Meter, as indicated by the customer on the Standard Application. -These customers are referred to as RENMICs in this Rule.

~~102~~101 All EU~~us~~ shall offer Net Metering to any customer that seeks to generate electricity on the customer's side of the EU's meter using Renewable Energy sources RENMIC, provided:

1. For residential customers, Net Metering nameplate ~~direct alternating current~~ capacity of the aggregated DGFs ~~at the customer's premises at a particular point of interconnection~~ shall be limited to 250 kW per residential customer and shall meet the requirements of the MDGIR;
2. For non-residential customers, Net Metering nameplate ~~direct alternating current~~ capacity for the customer's aggregate DGFs at the customer's premises at a particular point of interconnection shall be limited to 52 MW and shall meet the requirements of the MDGIR;

102 The generating capacity for the RENMIC's DGF or DGFs shall be limited to no more than is necessary to meet 125% of the RENMIC's requirements for electricity for the accounts designated for net-metering, based on either:

- i. Historical data of electricity consumption from up to the past five years; or
- ii. Projected data for future electricity consumption, including but not limited to reasonable estimates regarding the customer's planned increases in customer load.

103 A RENMIC's DGF(s) may be located remotely from actual load of the RENMIC(s) so long as the DGF is located in the allocated service territory of the EU providing service to the RENMIC(s).

104 EUs may refuse additional net metering requests. If the total Net Metering direct alternating current capacity in kW, as reported through these requirements, exceeds at any time 3-8 percent of the EU's total system peak demand expressed in kW recorded during the prior calendar year, the EU shall conduct a BCA for net-metered DG and apply to the Commission for approval to replace Classic 1:1 Net-Metering with compensation based on the Actual Benefits of Distributed Generation. Following such an application, the Commission shall lead the EU and other stakeholders in the development of a BCA framework for compensation which considers comprehensive assessments of the costs and benefits of rates and programs relating to DG, including DG with storage, DG with energy efficiency, and other appropriate combinations of measures. No more than once per year thereafter, the EU or any RENMIC of the EU may apply to the Commission for approval to modify the Actual Benefits of Distributed Generation upward or downward based on the a benefit-cost analysis conducted in accordance with the NSPM for DERs.

105 If the total Net Metering alternating current capacity in kW, as reported through these requirements, exceeds at any time 10 percent of an EU's total system peak demand expressed in kW recorded during the prior calendar year, the Commission shall establish a working group to consider whether it is in the public interest to revise these rules. The working group shall consider how to best implement cost effective grid modernization and infrastructure upgrades to accommodate additional DG while maintaining the safety and reliability of the grid.

~~100~~ _____

~~103~~106 Each EU shall develop a tariff for Net Metering and interconnection policies in concordance with this MRENMR and the MDGIR. Each EU shall make Net Metering available to eligible RENMICs on a first-come, first-served basis until such time as the aforementioned cap has been reached.

107 An EU shall provide Net Metering at non-discriminatory rates that are identical, with respect to rate structure and level, retail rate components, and any monthly fixed charges, to the rates that a RENMIC would be charged if not a RENMIC, unless otherwise approved by the Commission.

~~104~~108 Unless a RENMIC opts-out of meter aggregation by providing written notice to the EU, the EU shall aggregate all the RENMIC's accounts designated on the Standard Application for billing and crediting purposes.

~~109~~ In each Billing Period, the EU shall bill and credit the RENMIC under Classic 1:1 Net-Metering until the Commission approves the use of Actual Benefits of Distributed Generation based on BCA analysis for DG.

~~105~~110 If the Commission has approved the use of Actual Benefits of Distributed Generation under these rules, the RENMIC shall be billed as follows: ~~In~~ After each Billing Period, energy supplied to the RENMIC from the EU as recorded on the EU's bi-directional net meter will be billed using appropriate commission-approved rate and rider schedules. This provision means that energy self-supplied by the RENMIC, up to the amount supplied from the EU to the RENMIC (e.g., through the recording of meter Channel 1) will be credited to the RENMIC at the full retail rate (i.e., effectively displacing energy supplied from the EU). ~~During that same~~ After each Billing Period, any excess energy supplied from the RENMIC to the EU and recorded on the EU's bi-directional net meter in kWh (e.g., through meter Channel 2) will be credited on the RENMIC's bill at the applicable Total Benefits of Distributed Generation expressed in cents per kWh and shall be accounted for through the EU's fuel adjustment clause. The customer's monthly bill will be the total of billing for any usage (i.e., as recorded on meter Channel 1) subject to any customer charge and/or minimum bill provisions in the EU's rate and rider schedules less the energy generated by the RENMIC and any credit due to the customer from excess energy exported to the EU during a previous Billing Period (i.e., as recorded on meter Channel 2). If the sum total of the monthly bill is negative, any such amount will be carried over to the next Billing Period and applied to any charges arising during the subsequent Billing Period.

~~106~~111 Each new Billing Period shall begin with zero kWh credits to the RENMIC that remain from the prior Billing Period(s) or; however, subject to the provisions above if the Commission has approved the use of Actual Benefits of Distributed Generation in place of Classic 1:1 Net-Metering, the customer may carry over any value of energy credit arising from the prior Billing Period(s). When a customer closes his or her account with the EU, if the RENMIC has accumulated a dollar balance as a result of excess energy delivered to the EU, any such balance, net of costs owed to the EU, shall be paid to the RENMIC. If the customer has accumulated kWh credits as a result of Classic 1:1 Net-Metering, the EU shall pay the RENMIC the avoided cost rate of these kWh credits when the RENMIC closes his or her account.

~~107~~112 Credit for any excess energy exported to the EU shall not be applied to reduce any fixed monthly customer charges or minimum bill provisions imposed by the EU under Commission-approved rate and rider schedules.

~~108~~113 An EU shall offer a RENMIC the choice of a time differentiated energy tariff rate or a non-time-differentiated energy tariff rate, if the EU offers the choice to customers in the same rate class as the RENMIC. If a RENMIC uses a retail billing arrangement that has time- differentiated rates, the EU shall net any production from the DGFs against the customer's consumption within the same time-of-use period in the Billing Period and any excess energy exported to the EU will be credited as described above.

~~109~~114 Any renewable energy credits (RECs) created by the RENMIC are the property of the RENMIC, ~~unless otherwise approved by the Commission.~~ The EU shall not require the RENMIC to transfer any RECs created by the generation of renewable energy as a condition of receiving any compensation or benefit under this rule. --An EU may offer to purchase RECs from a RENMIC in exchange for a payment or incentive that is additional to, and separate from, the benefits and/or compensation rate a RENMIC receives under the net metering program. The EU shall not charge any back-up, standby, or Exit Fees to a RENMIC, unless otherwise approved by the Commission.

~~110~~115 An EU shall not charge a RENMIC any fee or charge, or require additional equipment, insurance or any other requirement, unless the fee, charge, or other requirement is specifically authorized in this MRENMR or the MDGIR, or the fee would apply to other customers in the same rate class that are not RENMICs, or unless otherwise approved by the Commission.

~~111~~116 All ~~RENMICs~~ DGFs must be electrically interconnected with their EU pursuant to the provisions of the MDGIR. All rules and regulations for interconnected DGFs within the MDGIR apply to RENMICs. Any Distribution System Upgrades, including additional equipment needed that is associated with the export of electricity, shall be at the RENMIC's expense, per the MDGIR.

~~112~~117 As a further requirement under this rule, each EU shall file with the Commission within three months of the effective date of this rule the EU's plan to publicize and inform its customers, whether through a website, a bill insert, or other form of communication, of the opportunities available to interconnect DGFs and receive compensation for excess energy delivered to the grid.

118 Nothing in this document shall abrogate any person's obligation to comply with all applicable Federal or State laws, rules or regulations, including the MDGIR.

Chapter 04: METERS AND METERING

~~101~~100 A ~~RENMIC~~ DGF shall be equipped with metering equipment that can measure the flow of electricity in each direction at the same time. This is typically

accomplished through use of a single bi-directional meter that records customer usage as well as excess energy exported to the EU (e.g., energy supplied to the customer net of the output of the RENMIC is measured on Channel 1 and excess energy supplied by the RENMIC to the EU in excess of the customer's requirements is measured on Channel 2).

~~102~~101 An EU may choose to use an existing electric revenue meter if the following criteria are met:

1. The meter is capable of measuring the flow of electricity both into and out of the RENMIC at the same time; and
2. The meter is accurate to within plus or minus five percent when measuring ~~excess~~ energy flowing from the RENMIC to the EU.

~~103~~102 If the RENMIC's existing electric revenue meter for the DGF does not meet the requirements above, the EU shall install a new revenue meter for the RENMIC, at the RENMIC's expense, within 10 business days after the interconnection agreement is executed and approved. If the EU offers a time-differentiated rate chosen by the RENMIC, the meter shall have the capability to appropriately record energy flows in each direction during any time-differentiated period.

103 Any subsequent revenue meter change will be at the EU's expense, meaning such meter expense will not be charged to an individual RENMIC but shall become part of the EU's overall cost of service and subsequent revenue requirement.

Chapter 05: LEGACY STATUS OF NET-METERING RATE STRUCTURES

100 The DGF of a RENMIC who, pursuant to the MDGIR, submits an Interconnection Request to the EU before December 31, 2025, shall remain under the Net-Metering rate structure for Total Benefits of Distributed Generation in effect when the Interconnection Request was signed by the REMNIC, for a period of twenty-five (25) years beginning June 1, 2021.

101 A DGF may be upgraded and still retain ~~grandfathered~~ legacy -status under this Chapter so long as the DGF still meets the generating capacity limits of Chapter 3, Section 101 of this Rule and the requirements of the MDGIR.

102 A RENMIC may at any time make an irrevocable election to opt-out of Legacy Status for a particular DGF and earn credits based on an updated set of terms and conditions, including as to compensation credits for production. A RENMIC who chooses to opt-out of Legacy Status for a particular DGF under this Chapter must provide written notice to the applicable EU.

Chapter 065: REPORTING REQUIREMENTS

100 Each EU with one or more RENMICs connected to its grid shall submit to the Mississippi Public Service Commission a Net Metering report within 90 days of the end of each calendar year. The report shall include the following information regarding RENMICs during the reporting period:

1. The total energy expressed in kilowatt-hours supplied to the EU's grid by RENMICs and a description of any estimation methodology used;
2. The total number of RENMICs that were paid for excess energy exported to the EU at the end of any Billing Period(s) during the prior calendar year;
3. The total dollar amount by month that the EU paid to RENMICs for excess energy exported to the EU during the prior calendar year;
4. The total number of net metering DGFs by resource type that were interconnected at the end of the prior calendar year;
5. The total rated nameplate ~~direct~~alternating current generating capacity of net metering DGFs installed during the prior calendar year broken out by resource type; and
6. The percentage of the EU's total system peak demand from the prior calendar year represented by the total rated nameplate ~~direct~~alternating current generating capacity of net metering DGFs;
7. The rate of growth of net metering DGFs installed during calendar year compared to prior years;
8. Percentage of DGFs that service low-income RENMICs; and
9. Statistical estimates of future market growth in net metering DGFs.

101 For purposes of these reporting requirements, any estimates shall be made using Commission-approved protocols unless no such protocols are available, in which case the estimates shall be accompanied by detailed calculations demonstrating how the estimates were made.

Chapter 076: SAFETY AND CONSUMER PROTECTION WORKING GROUP

100 In order to ensure adequate safeguards for safety and consumer protection, a joint working group shall be established between representatives of the Commission, the Mississippi Public Utilities Staff, the Office of the Mississippi Attorney General, and qualified stakeholders, as identified and requested by the working group. Prior to January 1, 2017, the working group shall establish and present to the Commission an initial set of consumer protection and safety standards and guidelines related to the installation and use of distributed generation systems. Thereafter, the working group shall reconvene as necessary to discuss additional issues related to net metering as they arise, and to present any recommendations on such issues to the Commission.

Chapter 087: REOPENER

100 Five years from the effective date of this Rule, the Commission shall open a new docket to assess the efficacy and functionality of the MRENMR, and make any subsequent revisions or modifications of the Rule that may be deemed necessary at that time.

**APPENDIX "A" Mississippi Distributed Generator Interconnection Rule Proposed
Level 1 Application Form and Agreement for Interconnection of
Distributed Generation Facilities**

Interconnection Customer Contact Information

Name _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Alternative Contact Information (if Different from Customer Contact Information)

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Distributed Generator Facility (DGF) Equipment Contractor

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Electrical Contractor (if different from DGF equipment contractor):

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____
License number: _____

Active license? yes ___ no ___

Facility Address (building where DGF is located)

Address: _____

City: _____ State: _____ Zip code: _____

Electric account number of facility site _____

DGF Information

Inverter manufacturer: _____ Model: _____

Nameplate Capacity: _____ kW _____ kVA _____ AC Volts

System design capacity: _____ kW _____ kVA

Prime mover: Photovoltaic Reciprocating engine Fuel cell
 Turbine Other _____

Energy Source: Solar Wind Hydro Diesel Natural gas

 Fuel oil Other _____

Is the inverter Certified? Yes

(Attach manufacturer's cut sheet showing certification listing and label information from the appropriate listing authority, e.g. UL 1741 listing. If no, facility is not eligible for Level 1 Application.)

Net Meter (DGF will export power pursuant to Mississippi Renewable Energy Net Metering Contract and tariff)

Estimated Commissioning Date: _____

Insurance Disclosure

The attached terms and conditions contain provisions related to liability, and indemnification and should be carefully considered by the Interconnection Customer. The Interconnection Customer is not required to obtain general liability insurance coverage as a precondition for interconnection approval; however, the Interconnection Customer is advised to consider obtaining appropriate insurance coverage to cover the Interconnection Customer's potential liability under this Agreement.

Interconnection Customer Signature

I hereby certify that: 1) I have read and understand the terms and conditions which are attached hereto by reference and are a part of this Agreement; 2) I hereby agree to comply with the attached terms and conditions; and 3) to the best of my knowledge, all of the information provided in this application request form is complete and true.

Interconnection Customer signature: _____

Title: _____ Date: _____

Conditional Agreement to Interconnect the DGF (for EU use only)

Receipt of the application fee is acknowledged and, by its signature below, the EU has determined the Interconnection Request is complete. Interconnection of the DGF is conditionally approved contingent upon the attached terms and conditions of this agreement, the return of the attached Certificate of Completion duly executed, and verification of electrical inspection and successful Witness Test.

EU Signature: _____ Date: _____

Printed Name: _____ Title: _____

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Terms and Conditions for Interconnection

- 1) **Construction of the DGF.** The Interconnection Customer may proceed to construct (including operational testing not to exceed 2 hours) the DGF once the conditional agreement to interconnect a DGF has been signed by the EU.
- 2) **Final Interconnection and Operation.** The Interconnection Customer may operate the DGF and interconnect with the EU's EDS once all of the following have occurred:
 - a) **Electrical Inspection:** Upon completing construction, the Interconnection Customer will have the DGF inspected by the local electrical wiring inspector with jurisdiction who shall establish that the DGF meets the requirements of the National Electrical Code.
 - b) **Certificate of Completion:** The Interconnection Customer shall provide the EU with a completed copy of the Certificate of Completion (Attachment 1), including evidence of the electrical inspection performed by the local authority having jurisdiction. The evidence of completion of the electrical inspection may be provided on inspection forms used by local inspecting authorities. The interconnection request shall not be finally approved until the EU's representative signs the Certificate of Completion.
 - c) EU has completed its Witness Test as per the following:
 - i) Within ten (10) business days of the estimated commissioning date, the EU shall, upon reasonable notice and at a mutually convenient time, conduct a Witness Test of

- the DGF to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes.
- 3) **IEEE 1547.** The DGF is installed, operated, and tested in accordance with the requirements of IEEE Std 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems", as amended and supplemented, at the time the interconnection request is submitted.
 - 4) **Access.** The EU shall have direct, unabated access to the metering equipment of the DGF at all times. The EU shall provide reasonable notice to the customer when possible prior to using its right of access.
 - 5) **Metering.** Any required metering shall be installed pursuant to appropriate tariffs and tested by the EU pursuant to the EUs meter testing requirements
 - 6) **Disconnection.** The EU may temporarily disconnect the DGF upon the following conditions:
 - a) For scheduled outages upon reasonable notice;
 - b) For unscheduled outages or emergency conditions;
 - c) If the DGF does not operate in the manner consistent with this agreement;
 - d) Improper installation or failure to pass the Witness Test;
 - e) If the DGF is creating a safety, reliability or a power quality problem; or
 - f) The Interconnection Equipment used by the DGF is de-listed by the Nationally Recognized Testing Laboratory that provided the listing at the time the interconnection was approved.
 - 7) **Indemnification.** The parties shall at all times indemnify, defend, and save the other party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other party's action or inactions of its obligations under this agreement on behalf of the indemnifying party, except in cases of gross negligence or intentional wrongdoing by the indemnified party.
 - 8) **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
 - 9) **Termination.** This agreement may be terminated under the following conditions:
 - a) By Interconnection Customer - The Interconnection Customer may terminate this application agreement by providing written notice to the EU.
 - b) By the EU - The EU may terminate this agreement if the Interconnection Customer fails to remedy a violation of terms of this agreement within 30 calendar days after notice, or such other date as may be mutually agreed to prior to the expiration of the 30 calendar day remedy period. The termination date can be no less than 30 calendar days after the Interconnection Customer receives notice of its violation from the EU.
 - 10) **Modification of DGF.** The Interconnection Customer must receive written authorization from the EU before making any changes to the DGF, other than Minor Changes that do not have a significant impact on safety or reliability of the EDS as determined by the EU. If the Interconnection Customer makes such modifications without the EU's prior written authorization, the EU shall have the right to temporarily disconnect the DGF until such authorization can be obtained.

- 11) **Permanent Disconnection.** In the event the agreement is terminated, the EU shall have the right to disconnect its facilities or direct the Interconnection Customer to disconnect its DGF.
- 12) **Disputes.** Each party agrees to attempt to resolve all disputes regarding the provisions of these interconnection procedures pursuant to the dispute resolution provisions of the Mississippi Distributed Generator Interconnection Rule (MGDIR).
- 13) **Governing Law, Regulatory Authority, and Rules.** The validity, interpretation and enforcement of this agreement and each of its provisions shall be governed by the laws of the State of Mississippi. Nothing in this agreement is intended to affect any other agreement between the EU and the Interconnection Customer. However, in the event that the provisions of this agreement are in conflict with the provisions of the EU's tariff, the EU tariff shall control.
- 14) **Survival Rights.** This agreement shall continue in effect after termination to the extent necessary to allow or require either party to fulfill rights or obligations that arose under the agreement.
- 15) **Assignment/Transfer of Ownership of the DGF:** This agreement shall terminate upon the transfer of ownership of the DGF to a new owner unless the transferring owner assigns the agreement to the new owner and so notifies the EU in writing prior to the transfer of electric service.
- 16) **Definitions.** Any capitalized term used herein and not defined shall have the same meaning as the defined terms used in the MGDIR.
- 17) **Notice.** Unless otherwise provided in this agreement, any written notice, demand, or request required or authorized in connection with this agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

(If to Interconnection Customer)

Use the contact information provided in the agreement for the interconnection customer. The interconnection customer is responsible for notifying the EU of any change in the contact party information, including change of ownership.

(If to EU)

Use the contact information provided on the EU's web page for DGF interconnection.

Attachment 1

Certificate of Completion

To be completed and returned to the EU when the installation is complete and final electrical inspector approval has been obtained.

Interconnection Customer Contact Information

Name _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Distributed Generator Facility (DGF) Equipment or Electrical Contractor

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Final Electric Inspection and Interconnection Customer Signature

The DGF is complete and has been approved by the local electric inspector having jurisdiction. A signed copy of the electric inspector's form indicating final approval is attached. The Interconnection Customer acknowledges that it shall not operate the DGF until receipt of the final acceptance and approval by the EU as provided below.

Signed _____ Date _____
(Signature of Interconnection Customer)

Printed name: _____

Attached signed electric inspection form to this document and return to the EU.

Acceptance and Final Approval for Interconnection (for EU use only)

The Interconnection Agreement is approved and the DGF is approved for interconnected operation upon the signing and return of this Certificate of Completion by EU.

Date of successful Witness Test: _____ Passed: (Initial) (_____)

EU signature: _____ Date: _____

Printed name: _____ Title: _____

**APPENDIX "B" Mississippi Distributed Generator Interconnection Rule Mississippi
Distributed Generator Interconnection Rule Proposed Level 2 and
Level 3 Application Form for Interconnection of Distributed
Generation Facilities**

Interconnection Customer Contact Information

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Alternative Contact Information (if Different from Customer Contact Information)

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Facility Address (Building Where the Distributed Generator Facility (DFG) is Located)

Address: _____
City: _____ State: _____ Zip code: _____

DGF Equipment Contractor

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Electrical Contractor (if different from DGF equipment contractor):

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____

Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____
License number: _____
Active license? yes ___ no ___

Electric Service Information for Customer Facility Where the DGF Will Be Interconnected

Electric account number of facility site: _____
Type of service: Single phase Three phase
If 3 phase transformer, indicate type:
Primary winding Wye Delta
Secondary winding Wye Delta
Transformer Size: _____ Impedance: _____

Intent of Generation (choose one)

Offset load (DGF will operate in parallel, but will not export power to EU)

Net Meter (DGF will export power pursuant to the Mississippi Renewable Energy Net Energy Metering Rule and tariff)

Export power (DGF will operate in parallel and will export power, but does not fit the criteria established in the Mississippi Renewable Energy Net Metering Rule and tariff)

Back-up generation (Units that temporarily parallel for more than 100 milliseconds)

Backup units that do not operate in Parallel for more than 100 milliseconds do not need an Interconnection Agreement.

Requested Procedure Under Which to Evaluate Interconnection Request

Please indicate below which review procedure applies to the interconnection request.

Level 2 - Application fee amount is \$_____.

Level 3 – Application fee amount is \$_____, to be applied toward any subsequent studies related to this application.

Descriptions for interconnection review categories do not list all criteria that must be satisfied. For a complete list of criteria, please refer to the Mississippi Distributed Generator Interconnection Rule.

DGF Information

Energy Production Equipment/Inverter Information

Energy Source: Hydro Wind Solar Diesel Biomass Natural gas
 Coal Oil Other _____

Energy Converter Type: Water turbine Wind turbine Photovoltaic cell
 Steam turbine Combustion turbine Reciprocating engine
 Other _____

Generator Type: Synchronous Induction Inverter Other _____

Nameplate Rating: _____ kW _____ kVA _____ AC Volts

System design capacity: _____ (kW) _____ (kVA)

Number of Units: _____

Rated Voltage: _____ Volts

Rated Current: _____ Amps

Interconnection Equipment components/system(s) to be used in the DGF that are Certified (if Certified equipment is used).

Component/System Listing	NRTL Providing Label &
--------------------------	------------------------

1. _____
2. _____
3. _____
4. _____

Attach manufacturer's cut sheet showing certification listing and label information from the appropriate listing authority, e.g. UL 1741 listing.

For Synchronous Machines:

Note: EU may be contacted to determine if all the information requested in this section is required for the proposed DGF.

Manufacturer: _____

Model no. _____ Version no. _____

Submit copies of the saturation curve and the vee curve

Salient Non-salient

Torque: _____ lb-ft Rated RPM: _____ Field amperes: _____ at rated generator voltage and current and _____ % PF over-excited

Type of exciter: _____

Output power of exciter: _____
Type of voltage regulator: _____ Locked rotor
current: _____ Amps Synchronous speed: _____ RPM
Winding connection: _____ Min. operating freq./time: _____
Generator connection: Delta Wye Wye grounded
Direct-axis synchronous reactance (X_d) _____ ohms
Direct-axis transient reactance (X'_d) _____ ohms
Direct-axis sub-transient reactance (X''_d) _____ ohms
Negative sequence reactance: _____ ohms
Zero sequence reactance: _____ ohms
Neutral impedance or grounding resister (if any): _____ ohms

For Induction Machines:

Note: EU may be contacted to determine if all the information requested in this section is required for the proposed DGF.

Manufacturer: _____
Model no. _____ Version no. _____
Locked rotor current: _____ Amps
Rotor resistance (R_r) _____ ohms Exciting current _____ Amps
Rotor reactance (X_r) _____ ohms Reactive power required: _____
Magnetizing reactance (X_m) _____ ohms _____ VARs (No load)
Stator resistance (R_s) _____ ohms _____ VARs (full load)
Stator reactance (X_s) _____ ohms
Short circuit reactance (X''_d) _____ ohms
Phases: Single Three-phase
Frame size: _____ Design letter: _____ Temperature rise: _____ °C.

Additional Information For Inverter-Based DGF

Inverter information:
Manufacturer: _____ Model: _____
Type: Forced commutated Line commutated
Rated output _____ Watts _____ Volts
Efficiency _____ % Power factor _____ %
Inverter UL1547 Listed: : Yes No

DC source / prime mover:
Rating: _____ kW Rating: _____ kVA
Rated voltage: _____ Volts
Open circuit voltage (If applicable): _____ Volts
Rated current: _____ Amps
Short circuit current (If applicable): _____ Amps

Other Required Facility Information:

One line diagram attached: Yes

Plot plan attached: Yes

Estimated Commissioning Date: _____

Interconnection Customer Signature

I hereby certify that all of the information provided in this application request form is true.

Interconnection Customer signature: _____

Title: _____ Date: _____

An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application (see page two):

Application fee included

Amount _____

EU Acknowledgement

Receipt of the application fee is acknowledged and the interconnection request is complete.

EU signature: _____ Date: _____

Printed name: _____ Title: _____

Definitions

Any capitalized term used herein shall have the same meaning as the defined terms used in the Mississippi Distributed Generator Interconnection Rule.

APPENDIX “C”: Mississippi Distributed Generator Interconnection Rule Mississippi Distributed Generator Interconnection Rule Proposed Level 2 and Level 3 Agreement for Interconnection of Distributed Generation Facilities

This Agreement is made and entered into this ____ day of _____, by and between _____, a _____ organized and existing under the laws of _____ (“Interconnection Customer”), and _____, a _____ existing under the laws of _____ (“Electric Utility (EU)”). Interconnection Customer and EU each may be referred to as a “Party,” or collectively as the “Parties.”

Recitals:

Whereas, Interconnection Customer is proposing to, install or direct the installation of a Distributed Generator Facility (DGF), or is proposing a generating capacity addition to an existing DGF, consistent with the Interconnection Request completed by Interconnection Customer on _____; and

Whereas, the Interconnection Customer will operate and maintain, or cause the operation and maintenance of the DGF; and

Whereas, Interconnection Customer desires to interconnect the DGF with EU’s Electric Distribution System (EDS).

Now, therefore, in consideration of the premises and mutual covenants set forth herein, and other good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, the Parties covenant and agree as follows:

Article 1. Scope and Limitations of Agreement

- 1.1 This Agreement shall be used for all Level 2 and Level 3 Interconnection Requests according to the procedures set forth in the Mississippi Distributed Generator Interconnection Rule (MDGIR).
- 1.2 This Agreement governs the terms and conditions under which the DGF will interconnect to, and operate in Parallel with, the EU’s EDS.
- 1.3 This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer’s power.
- 1.4 Nothing in this Agreement is intended to affect any other agreement between the EU and the Interconnection Customer. However, in the event that the provisions of this Agreement are in conflict with the provisions of the EU’s tariff, the EU tariff

shall control.

1.5 Responsibilities of the Parties

- 1.5.1 The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations.
- 1.5.2 The EU shall construct, own, operate, and maintain its Interconnection Facilities in accordance with this Agreement, IEEE Standard 1547, the National Electrical Safety Code and applicable standards promulgated by the Mississippi Public Service Commission.
- 1.5.3 The Interconnection Customer shall construct, own, operate, and maintain its DGF in accordance with this Agreement, IEEE Standard 1547, the National Electrical Code and applicable standards promulgated by the Mississippi Public Service Commission.
- 1.5.4 Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Common Coupling.
- 1.5.5 The Interconnection Customer agrees to design, install, maintain and operate its DGF so as to minimize the likelihood of causing an Adverse System Impact on an electric system that is not owned or operated by the EU.

1.6 Metering

The Interconnection Customer shall be responsible for the cost of the purchase and installation of metering equipment specified in Attachments 2 and 4 of this Agreement if new meter equipment is required by a tariff or study associated with the DGF interconnection.

1.7 Reactive Power

The Interconnection Customer shall design its DGF to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the power factor range required by the EU's applicable tariff for a comparable load customer. EU may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 3. Under no circumstance shall these additional requirements for reactive power or voltage support exceed the normal operating capabilities of the DGF. The requirements in 1.7 may fall outside the requirement for using IEEE 1547 as a technical standard.

1.8 Capitalized Terms

Capitalized terms used herein shall have the meanings specified in the definitions section of the MDGIR.

Article 2. Inspection, Testing, Authorization, and Right of Access

2.1 *Equipment Testing and Inspection*

The Interconnection Customer shall test and inspect its DGF including the Interconnection Equipment prior to interconnection in accordance with IEEE Std 1547, IEEE Std 1547.1, and the technical and procedural requirements in the MDGIR. The Interconnection Customer shall not operate its DGF in Parallel with EU's EDS without prior written authorization by the EU as provided for in 2.1.1 – 2.1.3.

2.1.1 The EU shall perform a Witness Test after construction of the DGF is completed. The Interconnection Customer shall provide the EU at least 20 days' notice of the planned Commissioning Test for the DGF. The EU shall contact the Interconnection Customer to schedule the Witness Test at a mutually agreeable time within 10 business days of the scheduled commissioning test. If the Witness Test is not acceptable to the EU, the Interconnection Customer will be granted a period of 30 calendar days to address and resolve any deficiencies. The time period for addressing and resolving any deficiencies may be extended upon the mutual agreement of the EU and the Interconnection Customer. If the Interconnection Customer fails to address and resolve the deficiencies to the satisfaction of the EU, the applicable termination provisions of 3.3.7 shall apply.

2.1.2 To the extent that the Interconnection Customer decides to conduct interim testing of the DGF prior to the Witness Test, it may request that the EU observe these tests and that these tests be deleted from the final Witness Test. The EU may, at its own expense, send qualified personnel to the DGF to observe such interim testing. Nothing in this Section 2.1.2 shall require the EU to observe such interim testing or preclude the EU from performing these tests at the final Witness Test. Regardless of whether the EU observes the interim testing, the Interconnection Customer shall obtain permission in advance of each occurrence of operating the DGF in parallel with the EU's system.

2.1.3 Upon successful completion of the Witness Test, the EU shall affix an authorized signature to the Certificate of Completion (Attachment 5) and return it to the Interconnection Customer approving the interconnection and authorizing Parallel Operation. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

2.2 Commercial Operation

The Interconnection Customer shall not operate the DGF in Parallel, except for interim testing as provided in 2.1, until such time as the Certificate of Completion is signed by all Parties.

2.3 Right of Access

The EU shall have access to the isolation device and metering equipment of the DGF at all times. The EU shall provide reasonable notice to the customer when possible prior to using its right of access.

Article 3. Effective Date, Term, Termination, and Disconnection

3.1 Effective Date

This Agreement shall become effective upon execution by the Parties.

3.2 Term of Agreement

This Agreement shall become effective on the Effective Date and shall remain in effect in perpetuity unless terminated earlier in accordance with Article 3.3 of this Agreement.

3.3 Termination

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.

3.3.1 The Interconnection Customer may terminate this Agreement at any time by giving the EU 30 calendar days prior written notice.

3.3.2 Either Party may terminate this Agreement after default pursuant to Article 6.5.

3.3.3 The EU may terminate upon 60 calendar days' prior written notice for failure of the Interconnection Customer to complete construction of the DGF within 12 months of the in-service date as specified by the Parties in Attachment 1, which may be extended by mutual agreement of the Parties which shall not be unreasonably withheld.

3.3.4 The EU may terminate this Agreement upon 60 calendar days' prior written notice if the Interconnection Customer fails to operate the DGF in parallel with EU's EDS for three consecutive years.

3.3.5 Upon termination of this Agreement, the DGF will be disconnected from the EU's EDS. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

3.3.6 The provisions of this Article shall survive termination or expiration of this Agreement.

3.3.7 The EU may terminate this Agreement if the Interconnection Customer fails to comply with the Witness Test requirement in 2.2.1.

3.4 Temporary Disconnection

Either party may temporarily disconnect the DGF from the EDS in the event of an Emergency Condition (see definition below) for so long as the Party determines it is reasonably necessary in the event one or more of the following conditions or events occurs.

3.4.1 Emergency Conditions—shall mean any condition or situation: (1) that in the judgment of the Party making the claim is reasonably likely to endanger life or property; or (2) that, in the case of the EU, is reasonably likely to cause an Adverse System Impact; or (3) that, in the case of the Interconnection Customer, is reasonably likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security

of, or damage to, the DGF or the Interconnection Equipment. Under Emergency Conditions, the EU or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the DGF. The EU shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the DGF. The Interconnection Customer shall notify the EU promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the EU's EDS. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

- 3.4.2 Scheduled Maintenance, Construction, or Repair – the EU may interrupt interconnection service or curtail the output of the DGF and temporarily disconnect the DGF from the EU's EDS when necessary for scheduled maintenance, construction, or repairs on EU's EDS. The EU shall provide the Interconnection Customer with five business days notice prior to such interruption. The EU shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.
- 3.4.3 Forced Outages - During any forced outage, the EU may suspend interconnection service to effect immediate repairs on the EU's EDS. The EU shall use reasonable efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the EU shall, upon written request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.
- 3.4.4 Adverse Operating Effects – the EU shall provide the Interconnection Customer with a written notice of its intention to disconnect the DGF if, based on the operating requirements specified in Attachment 3, the EU determines that operation of the DGF will likely cause disruption or deterioration of service to other customers served from the same electric system, or if operating the DGF could cause damage to the EU's EDS. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon written request. The EU may disconnect the DGF if, after receipt of the notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time unless Emergency Conditions exist in which case the provisions of 3.4.1 apply.
- 3.4.5 Modification of the DGF - The Interconnection Customer must receive written authorization from the EU prior to making any change to the DGF, other than a Minor Equipment Modification, that could cause an Adverse System Impact. If the Interconnection Customer makes such modification without the EU's prior written authorization, the EU shall have the right to temporarily disconnect the DGF until such time as the EU reasonably concludes the modification poses no threat to the safety or reliability of its EDS.

- 3.4.6 Reconnection - The Parties shall cooperate with each other to restore the DGF, Interconnection Facilities, and EU's EDS to their normal operating state as soon as reasonably practicable following any disconnection pursuant to this section; provided, however, if such disconnection is done pursuant to Section 3.4.5 due to the Interconnection Customer's failure to obtain prior written authorization from the EU for Minor Equipment Modifications, the EU shall reconnect the Interconnection Customer only after determining the modifications do not impact the safety or reliability of its EDS.

Article 4. Cost Responsibility for Interconnection Facilities and Distribution System Upgrades

4.1 Interconnection Facilities

- 4.1.1 The Interconnection Customer shall pay for the cost of the Interconnection Facilities identified in the Facilities Study or the Level 2 additional review for initial modifications itemized in Attachment 2 of this Agreement. The EU shall identify the Interconnection Facilities necessary to safely interconnect the DGF with the EU's EDS, the cost of those facilities, and the time required to build and install those facilities.
- 4.1.2 The Interconnection Customer shall be responsible for its expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its Interconnection Equipment, and (2) its reasonable share of operating, maintaining, repairing, and replacing any Interconnection Facilities owned by the EU as set forth in Attachment 2.
- 4.1.3 The Interconnection Customer, at the Net-Metering Customer's expense, shall meet safety and performance standards established by local and national electrical codes including the National Electrical Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the National Electrical Safety Code (NESC), and Underwriters Laboratories (UL). However, the Interconnection Customer shall not be required to pay the cost of any standards that are unilaterally adopted by the EU, so long as the Interconnection Customer meets the safety and performance standards outlined above.
- 4.1.4 The DGF, at the RENMIC's expense, shall meet all safety and performance standards adopted by the EU and filed with and approved by the Commission pursuant to these Rules that are necessary to assure safe and reliable operation of the DGF to the EU's system. However, the Interconnection Customer shall not be required to pay the cost of any standards that are unilaterally adopted by the EU without Commission approval.

4.2 Distribution System Upgrades

The EU shall design, procure, construct, install, and own any Distribution System Upgrades. The actual cost of the Distribution System Upgrades that are necessary for the safety and reliability of the distribution system, including overheads, shall be directly assigned to the Interconnection Customer. However, any discretionary Distribution System Upgrades that are not required by local and national standards shall be borne by the EU. The Interconnection Customer may be entitled to financial contribution from any other EU customers who may in the future utilize the upgrades paid for by the Interconnection Customer. Such contributions shall be governed by the rules, regulations and decisions of the MDGIR.

Article 5. Billing, Payment, Milestones, and Financial Security

5.1 *Billing and Payment Procedures and Final Accounting*

- 5.1.1 The EU shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of EU provided Interconnection Facilities and Distribution System Upgrades contemplated by this Agreement as set forth in Appendix 3, on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within 30 calendar days of receipt, or as otherwise agreed to by the Parties.
- 5.1.2 Within ninety (90) calendar days of completing the construction and installation of the EU's Interconnection Facilities and Distribution System Upgrades described in the Attachments 2 to this Agreement, the EU shall provide the Interconnection Customer with a final accounting report of any difference between (1) the actual cost incurred to complete the construction and installation and the budget estimate provided to the Interconnection Customer and a written explanation for any significant variation; and (2) the Interconnection Customer's previous deposit and aggregate payments to the EU for such Interconnection Facilities and Distribution System Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous deposit and aggregate payments, the EU shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the EU within thirty (30) calendar days. If the Interconnection Customer's previous deposit and aggregate payments exceed its cost responsibility under this Agreement, the EU shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.
- 5.1.3 If a Party in good faith disputes any portion of its payment obligation pursuant to this Article 5, such Party shall pay in a timely manner all non-

disputed portions of its invoice, and such disputed amount shall be resolved pursuant to the dispute resolution provisions contained in Article 8. Provided such Party's dispute is in good faith, the disputing Party shall not be considered to be in default of its obligations pursuant to this Article.

5.2 Interconnection Customer Deposit

When a Level 3 Interconnection Feasibility Study, Interconnection System Impact Study, or Interconnection Facility Study or a Level 2 review of minimal modifications is required under the MDGIRs, the EU may require the Interconnection Customer to pay a deposit equal to 50% of the estimated cost to perform the study or review. At least twenty (20) business days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the EU's Interconnection Facilities and Distribution **System** Upgrades, the Interconnection Customer shall provide the EU with a deposit equal to 50% of the estimated costs prior to its beginning design of such facilities, provided the total cost is in excess of \$1,000.

Article 6. Assignment, Limitation on Damages, Indemnity, Force Majeure, and Default

6.1 Assignment

This Agreement may be assigned by either Party upon fifteen (15) Business Days prior written notice, and with the opportunity to object by the other Party. Should the Interconnection Customer assign this agreement, the EU has the right to request the assignee agree to the assignment and the terms of this Agreement in writing. When required, consent to assignment shall not be unreasonably withheld; provided that:

- 6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate (which shall include a merger of the Party with another entity), of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;
- 6.1.2 The Interconnection Customer shall have the right to assign this Agreement, without the consent of the EU, for collateral security purposes to aid in providing financing for the DGF. For DGFs that are integrated into a building facility, the sale of the building or property will result in an automatic transfer of this agreement to the new owner who shall be responsible for complying with the terms and conditions of this Agreement.
- 6.1.3 Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same obligations as the Interconnection Customer.

6.2 Limitation on Damages

Except for cases of gross negligence or willful misconduct, the liability of any Party to this Agreement shall be limited to direct actual damages, and all other damages at law are waived. Under no circumstances, except for cases of gross negligence or willful misconduct, shall any Party or its directors, officers, employees and agents, or any of them, be liable to another Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary or consequential damages, including lost profits, lost revenues, replacement power, cost of capital or replacement equipment. This limitation on damages shall not affect any Party's rights to obtain equitable relief, including specific performance, as otherwise provided in this Agreement. The provisions of this Section 6.2 shall survive the termination or expiration of the Agreement.

6.3 Indemnity

- 6.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.
- 6.3.2 The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.
- 6.3.3 Promptly after receipt by an indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this Article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.
- 6.3.4 If an indemnified Party is entitled to indemnification under this Article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article, to assume the defense of such claim, such indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.
- 6.3.5 If an indemnifying Party is obligated to indemnify and hold any indemnified Party harmless under this Article, the amount owing to the indemnified person shall be the amount of such indemnified Party's actual loss, net of any insurance or other recovery.

6.4 Force Majeure

- 6.4.1 As used in this Article, a Force Majeure Event shall mean any act of God, labor disturbance, act of the public enemy, war, acts of terrorism,

insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment through no direct, indirect, or contributory act of a Party, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of gross negligence or intentional wrongdoing.

- 6.4.2 If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking and will take to mitigate the effects of the event on its performance, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party shall be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated. The Affected Party shall use reasonable efforts to resume its performance as soon as possible.

6.5 Default

- 6.5.1 No default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement, or the result of an act or omission of the other Party.
- 6.5.2 Upon a default of this Agreement, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 6.5.3 the defaulting Party shall have 60 calendar days from receipt of the default notice within which to cure such default; provided however, if such default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within 20 calendar days after notice and continuously and diligently complete such cure within six months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.
- 6.5.3 If a Party has made an assignment of this Agreement not specifically authorized by Article 6.1, fails to provide reasonable access pursuant to Article 2.3, is in default of its obligations pursuant to Article 7, or if a Party is in default of its payment obligations pursuant to Article 5 of this Agreement, the defaulting Party shall have 30 days from receipt of the default notice within which to cure such default.

- 6.5.4 If a default is not cured as provided for in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

Article 7. Insurance

For DGFs with a Nameplate Capacity of 2 MW or above, the Interconnection Customer shall carry adequate insurance coverage that shall be acceptable to the EU; provided, that the maximum comprehensive/general liability coverage that shall be continuously maintained by the Interconnection Customer during the term shall be not less than \$2,000,000 for each occurrence, and an aggregate, if any, of at least \$4,000,000. The EU, its officers, employees and agents will be added as an additional insured on this policy.

Article 8. Dispute Resolution

- 8.1 A party shall attempt to resolve all disputes regarding interconnection as provided in this Agreement and the MDGIR promptly, equitably, and in a good faith manner.
- 8.2 When a dispute arises, a party may seek immediate resolution through complaint procedures available through the Commission, or an alternative dispute resolution process approved by the Commission, by providing written notice to the Commission and the other party stating the issues in dispute. Dispute resolution will be conducted in an informal, expeditious manner to reach resolution with minimal costs and delay. When available, dispute resolution may be conducted by phone.
- 8.4 When disputes relate to the technical application of this Agreement and the MDGIR, the Commission may designate a technical consultant to resolve the dispute. Upon Commission designation, the parties shall use the technical consultant to resolve disputes related to interconnection. Costs for a dispute resolution conducted by the technical consultant shall be established by the technical consultant, subject to review by the Commission.
- 8.4 Pursuit of dispute resolution may not affect an Interconnection Customer with regard to consideration of an Interconnection Request or an Interconnection Customer's queue position.
- 8.5 If the Parties fail to resolve their dispute under the dispute resolution provisions of this Article, nothing in this Article shall affect any Party's rights to obtain equitable relief, including specific performance, as otherwise provided in this Agreement.

Article 9. Miscellaneous

9.1 Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of Mississippi, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations.

9.2 Amendment

Modification of this Agreement shall be only by a written instrument duly executed by both Parties.

9.3 No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

9.4 Waiver

9.4.1 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement shall not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

9.4.2 Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from EU. Any waiver of this Agreement shall, if requested, be provided in writing.

9.5 Entire Agreement

This Agreement, including all attachments, constitutes the entire Agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants that constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

9.6 Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

9.7 No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

9.8 Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other governmental authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

9.9 Environmental Releases

Each Party shall notify the other Party, first orally and then in writing, of the release any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the DGF or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

9.10 Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

9.10.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made. Any applicable obligation imposed by this Agreement upon the hiring

Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

9.10.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

Article 10. Notices

10.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

If to Interconnection Customer:

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ E-mail _____

If to EU:

EU _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ E-mail _____

10.2 Billing and Payment

Billings and payments shall be sent to the addresses set out below:

If to Interconnection Customer

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____

If to EU

EU: _____
Attention: _____
Address: _____

City: _____ State: _____ Zip: _____

10.3 Designated Operating Representative

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Attention: _____
Address: _____
City: _____ *State:* _____ *Zip:* _____
Phone: _____ *Fax:* _____

EU's Operating Representative: _____

Attention: _____
Address: _____
City: _____ *State:* _____ *Zip:* _____
Phone: _____ *Fax:* _____

10.4 Changes to the Notice Information

Either Party may change this notice information by giving five business days written notice prior to the effective date of the change.

Article 11. Signatures

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For the Interconnection Customer:

Name: _____
Title: _____
Date: _____

For EU:

Name: _____
Title: _____
Date: _____

Attachment 1

Construction Schedule, Proposed Equipment and Settings

This attachment shall include the following:

1. The construction schedule for the DGF
2. A one-line diagram indicating the DGF, Interconnection Equipment, Interconnection Facilities, metering equipment, and Distribution System Upgrades
3. Component specifications for equipment identified in the one-line diagram
4. Component settings
5. Proposed sequence of operations

Attachment 2

**Description, Costs and Time Required to Build and Install EU's
Interconnection Facilities and Distribution System Upgrades**

This attachment shall include the following:

EU's Interconnection Facilities and Distribution System Upgrades including any required new metering shall be itemized and a best estimate of itemized costs, including overheads, shall be provided based on the Facilities Study or Level 2 additional review for minimal modifications of the EDS.

Also, a best estimate for the time required to build and install EU's Interconnection Facilities and Distribution System Upgrades will be provided based on the Facilities Study or Level 2 additional review for minimal modifications of the EDS.

Attachment 3

Operating Requirements for DGFs Operating in Parallel

This attachment shall include the following:

Applicable sections of EU's operating manuals applying to the DGF interconnection shall be listed and Internet links shall be provided. Any special operating requirements not contained in EU's existing operating manuals shall be clearly identified. These operating requirements shall not impose additional technical or procedural requirements on the DGF beyond those found the MDGIR, except those required for safety.

Attachment 4

Metering Requirements

This attachment shall include the following:

Metering requirements for the DGF shall be clearly indicated along with an identification of the appropriate tariffs that establish these requirements and an internet link to these tariffs.

Attachment 5

Certificate of Completion

To be completed and returned to the EU when the installation is complete and final electrical inspector approval has been obtained.

Interconnection Customer Contact Information

Name: _____
Mailing Address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Distributed Generator Facility (DGF) Equipment or Electrical Contractor

Name: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Telephone (Daytime): _____ (Mobile): _____
Facsimile number: _____ E-mail address: _____

Final Electric Inspection and Interconnection Customer Signature

The DGF is complete and has been approved by the local electric inspector having jurisdiction. A signed copy of the electric inspector's form indicating final approval is attached. The Interconnection Customer acknowledges that it shall not operate the DGF until receipt of the final acceptance and approval by the EU as provided below.

Signed _____ Date _____
(Signature of interconnection customer)

Printed name: _____

Attached signed electric inspection form to this document and return to the EU.

Acceptance and Final Approval for Interconnection (for EU use only)

The Interconnection Agreement is approved and the DGF is approved for interconnected operation upon the signing and return of this Certificate of Completion by EU.

Date of successful Witness Test: _____ Passed: (Initial) (_____) _____

EU signature: _____ Date: _____

Printed name: _____ Title: _____